



STIC Search Report

EIC 3700

STIC Database Tracking Number: 180094

TO: Alvin Stewart
Location: RND 6d01
Art Unit: 3738
Thursday, February 23, 2006

Case Serial Number: 10/713837

From: Ethel Leslie
Location: EIC 3700
RND 8A34
Phone: 571-272-5992

Ethel.leslie@uspto.gov

Search Notes

Alvin,

Attached is the completed search for a intervertebral prosthesis. I searched the inventors in the patent as well as non-patent literature and I have attached the results. I did an extensive search on the requested topic in a number of relevant bibliographic and full-text databases. Although, I could not find anything that that I thought met the specifications we discussed, please look over the included results as there may be items of interest. I have attached the search strategies used for the searches performed.

If you have a moment, please fill out the attached STIC Feedback Form. If there is anything I can do to refine or revise this search, please let me know.

Sincerely,
Ethel Leslie

RUSH

Access DB# 1800094

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Alvin Stewart Examiner #: 76184 Date: 02/21/06
Art Unit: 3738 Phone Number ~~30~~ 272-4760 Serial Number: 10713,837
Mail Box and Bldg/Room Location: 6D01 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Human spinal disc prosthesis.
Inventors (please provide full names): Vincent Bryan, Alex Kunzler

Earliest Priority Filing Date: 11/14/94.

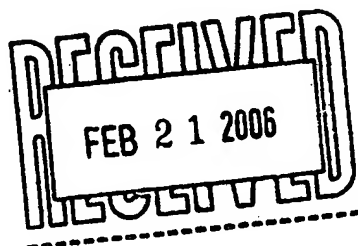
**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

See Attachments.

The most important part of the invention is the method of forming a concave surface in the endplates of confronting vertebral bodies with an implant having the structure limitations show in claim 35, 36, 29, 33, 24.

Any question please let me know.

Alvin.



CS
CORRINE McDERMOTT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

Set	Items	Description
S1	41	AU=(BRYAN V? OR BRYAN, V?)
S2	33	AU=(KUNZLER A? OR KUNZLER, A?)
S3	4	S1 AND S2
S4	2	RD (unique items)
S5	18	S1:S2 AND (IMPLANT? OR PROSTHES? OR SPINE OR SPINAL OR VER- TEBRA? OR INTERVERTEBRA?)
S6	14	S5 NOT S3
S7	9	RD (unique items)
File 155:		MEDLINE(R) 1951-2006/Feb 20 (c) format only 2006 Dialog
File 73:		EMBASE 1974-2006/Feb 22 (c) 2006 Elsevier Science B.V.
File 5:		Biosis Previews(R) 1969-2006/Feb W2 (c) 2006 BIOSIS
File 34:		SciSearch(R) Cited Ref Sci 1990-2006/Feb W2 (c) 2006 Inst for Sci Info
File 434:		SciSearch(R) Cited Ref Sci 1974-1989/Dec (c) 1998 Inst for Sci Info

4/5/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0013491212 BIOSIS NO.: 200200084723

Human spinal disc prosthesis

AUTHOR: Bryan V ; Kunzler A

AUTHOR ADDRESS: Mercer Island, Wash., USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1203 (1): p309 Oct. 7, 1997 1997

MEDIUM: print

PATENT NUMBER: US 5674296 PATENT DATE GRANTED: Oct. 7, 1997 19971007

PATENT CLASSIFICATION: 623-17 PATENT ASSIGNEE: SPINAL DYNAMICS CORPORATION

PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Citation

LANGUAGE: English

DESCRIPTORS:

MAJOR CONCEPTS: Methods and Techniques; Nervous System--Neural

Coordination; Public Health--Allied Medical Sciences; Skeletal System--
Movement and Support

MISCELLANEOUS TERMS: HEALTH CARE; MEDICAL EQUIPMENT; SPINAL DISC
PROSTHESIS

CONCEPT CODES:

18001 Bones, joints, fasciae, connective and adipose tissue - General and
methods

20501 Nervous system - General and methods

37001 Public health - General and miscellaneous

01004 Methods - Laboratory methods

10511 Biophysics - Bioengineering

4/5/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0012567950 BIOSIS NO.: 200000286263

Human spinal disc prosthesis with hinges

AUTHOR: Bryan Vincent (Reprint); Kunzler Alex

AUTHOR ADDRESS: 4624 E. Mercer Way, Mercer Island, WA, 98040, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1229 (2): Dec. 14, 1999 1999

MEDIUM: e-file

PATENT NUMBER: US 6001130 PATENT DATE GRANTED: December 14, 1999 19991214

PATENT CLASSIFICATION: 623-17 PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The invention relates to a spinal disc endoprosthesis. The endoprosthesis has a resilient body formed of one or more materials which may vary in stiffness from a relatively stiff exterior annular gasket portion to a relatively supple central nucleus portion. Concave-convex elements at least partly surround that nucleus portion so as to retain the nucleus portion and gasket between adjacent vertebral bodies in a patient's spine. Assemblies of endoprosthetic discs, endoprosthetic vertebral bodies, and endoprosthetic longitudinal ligaments may be constructed. To implant this endoprosthesis assembly, information is obtained regarding the size, shape, and nature of a patient's damaged

spine. Thereafter, one or more prosthetic vertebral bodies and disc units are constructed in conformity with that information. Finally, the completed and conformed vertebral body and disc assembly is implanted in the patient's spine.

7/5/1 (Item 1 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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17974320 PMID: 14560190

Wear analysis of the Bryan Cervical Disc prosthesis .

Anderson Paul A; Rouleau Jeffrey P; **Bryan Vincent E** ; Carlson Cathy S
University of Wisconsin, Department of Orthopedic Surgery and
Rehabilitation, University of Wisconsin Hospitals, Madison, Wisconsin
53792, USA. anderson@surgery.wisc.edu

Spine (United States) Oct 15 2003, 28 (20) pS186-94, ISSN 1528-1159
Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

STUDY DESIGN: In vitro wear testing of the Bryan Cervical Disc **prosthesis** was performed in a cervical **spine** simulator. The biologic response was assessed in chimpanzee and goat animal models. **OBJECTIVE:** Determine the wear characteristics of the Bryan disc. **SUMMARY OF BACKGROUND DATA:** Large joint arthroplasties fail most commonly by wear and consequent formation of particulate material, which induces an inflammatory response. Therefore, measuring the wear characteristics of the new **spinal** disc replacements is important. **METHODS:** Six prosthetic assemblies were tested to 10 or 40 million cycles by load and motion and 3 additional assemblies were tested by load only in a cervical **spine** simulator. Any debris was examined using ASTM standards. The local biologic response to the **prosthesis** was examined in two chimpanzees. Nine goats were used to assess the biologic response in both local and distant tissues. Arthrodesis was performed on three additional control goats that received an allograft and an anterior cervical plate. **RESULTS:** Wear results: cervical **spine** simulators that applied the loads and motions associated with activities of daily living produced wear particulate at a rate of 1.2 mg per million cycles. Device height decreased 0.02 mm per million cycles with approximately 77% of this decrease due to gradual creep of the nucleus under the constant compressive load. Particles generated were granular in shape with a mean feret diameter of 3.9 microm. All animals tolerated placement of the Bryan disc. Wear debris was present in the periprosthetic and epidural spaces in some animals. However, no significant inflammatory response was observed. No wear material was found distant from the **implant** in draining lymph tissue, the liver, or the spleen. **CONCLUSIONS:** The Bryan disc has satisfactory wear characteristics and does not produce a significant inflammatory response.

Tags: Comparative Study

Descriptors: *Arthroplasty, Replacement--methods--MT; *Cervical **Vertebrae** --surgery--SU; * **Intervertebral** Disk--surgery--SU; Animals; Arthroplasty, Replacement--adverse effects--AE; Arthroplasty, Replacement --instrumentation--IS; Biomechanics; Biomimetic Materials--adverse effects --AE; Discectomy--adverse effects--AE; Goats; Granuloma--etiology--ET; Hyperplasia--etiology--ET; Liver--pathology--PA; Lymph Nodes--pathology--PA ; Lymphadenitis--etiology--ET; Lymphoid Tissue--pathology--PA; Macrophages --pathology--PA; Models, Animal; Nervous System--pathology--PA; Pan troglodytes; Particle Size; Postoperative Complications--etiology--ET; **Spinal** Cord--pathology--PA; Spleen--pathology--PA; Time Factors

Record Date Created: 20031015

Record Date Completed: 20050613

7/5/2 (Item 2 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

14602302 PMID: 14589273

Artificial intervertebral discs and beyond: a North American Spine Society Annual Meeting symposium.

Blumenthal Scott L; Ohnmeiss Donna D; Guyer Richard; Hochschuler Stephen; McAfee Paul; Garcia Rolando; Salib Richard; Yuan Hansen; Lee Casey; Bertagnoli Rudolph; **Bryan Vincent** ; Winter Robert

spine journal - official journal of the North American Spine Society (United States) Nov-Dec 2002, 2 (6) p460-3, ISSN 1529-9430

Journal Code: 101130732

Publishing Model Print

Document type: Congresses

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

BACKGROUND CONTENT: This is a synopsis of a symposium presented to the North American **Spine** Society Annual Meeting in Seattle, WA, 2001. **PURPOSE:** To bring to the reader who may not have attended the symposium a distillation of the material presented on this frontier of **spinal** surgery. **METHODS:** Panel presentation. **RESULTS:** The proposed indication for artificial disc replacement is a degenerated but contained disc, painful to the point of major life-style interruption, refractory to at least 1 year of nonoperative treatment, preferably at a single lumbar level and without infection, listhesis or major facet joint disease or **spinal** stenosis. Total disc replacements have been developed and used mostly in Europe. Disc nucleus replacements have also been developed. No disc replacement has been approved for general use in North America as yet. The US Food and Drug Administration is conducting investigational device exemption studies at this time. **CONCLUSIONS:** Artificial disc replacement is not a new concept, the first attempts having been done in the early 1950s. During the past 15 years, considerable advance has been made with large numbers of patients, mostly in Europe, having surgery with either total disc **prostheses** or disc nucleus replacements. Only with truly scientific studies using patient randomization, pre- and postsurgery outcome analyses by unbiased independent observers and statistical analysis by independent experts will the real value of these devices be realized.

Tags: Female; Male

Descriptors: ***Intervertebra** 1 Disk--surgery--SU; * **Prosthesis** Design; * **Prosthesis** **Implantation** --methods--MT; Biocompatible Materials; Biomechanics; Humans; Prognosis; **Prosthesis** Failure; Recovery of Function ; Risk Assessment; Societies, Medical; Stress, Mechanical; Treatment Outcome

CAS Registry.No.: 0 (Biocompatible Materials)

Record Date Created: 20031031

Record Date Completed: 20031210

7/5/3 (Item 3 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

14444650 PMID: 12384728

Cervical motion segment replacement.

Bryan Vincent E

Spinal Dynamics Corporation, 9655 SE 36th St, Suite 110, Mercer Island, WA 98040-3732, USA. bryanv@spinedyn.com

European spine journal - official publication of the European Spine Society, the European Spinal Deformity Society, and the European Section of the Cervical Spine Research Society (Germany) Oct 2002, 11 Suppl 2 pS92-7, ISSN 0940-6719 Journal Code: 9301980

Publishing Model Print-Electronic

Document type: Clinical Trial; Journal Article; Multicenter Study

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Subfile: INDEX MEDICUS

When symptoms bring to light a cervical **spine** degenerative disc process that requires surgical intervention, a symptom relieving procedure such as decompression, followed by functional restoration, arthroplasty, offers the benefit of prophylaxis of accelerated spondylosis at the operated level. In addition, by altering the biomechanical stress factors at adjacent levels, theoretically it should offer prophylactic benefit at these levels as well. The design requirements for a cervical disc **prosthesis**, the importance of precision instrumentation, and technique are described. Mechanical testing, animal testing, the study design for the EU clinical study, and the operative technique are discussed. The clinical 1- and 2-year data to date are presented.

Tags: Female; Male

Descriptors: *Cervical **Vertebrae** --surgery--SU; * **Intervertebral** Disk Displacement--surgery--SU; * **Prostheses** and **Implants** ; Adult; Aged; Biomechanics; Cervical **Vertebrae** --physiology--PH; Humans; **Intervertebral** Disk--pathology--PA; **Intervertebral** Disk--surgery--SU; **Intervertebral** Disk Displacement--pathology--PA; Joints--physiology--PH; Middle Aged; Postoperative Complications; Quality of Life; Range of Motion, Articular; **Spinal** Fusion; Treatment Outcome

Record Date Created: 20021017

Record Date Completed: 20021211

Date of Electronic Publication: 20020912

7/5/6 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0014933256 BIOSIS NO.: 200400304013

Peanut spectacle multi discoid thoraco-lumbar disc prosthesis

AUTHOR: **Bryan Vincent** (Reprint)

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1283 (3): June 15, 2004 2004

MEDIUM: e-file

PATENT NUMBER: US 6749635 PATENT DATE GRANTED: June 15, 2004 20040615

PATENT CLASSIFICATION: 623-1716 PATENT ASSIGNEE: SDGI Holdings, Inc.

PATENT COUNTRY: USA

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A small profile, peanut spectacle-shaped prosthetic disc device is provided. The device housing is comprised of two longitudinally split hollow halves, between which are contained multiple discoid shaped resilient bodies which may be of a polymeric type, or they may contain hydrogel. These bodies may lie in concave surfaces located on the interior of each side of the split cylindrical housing. The housing halves, even under maximum physiological loads, do not contact one another directly. The shell shape permits relatively easy introduction of

the **implant** into inter- **vertebral** spaces in the thoracic or lumbar region of the human **spine** .

DESCRIPTORS:

MAJOR CONCEPTS: Biomedical Engineering--Allied Medical Sciences;
Equipment Apparatus Devices and Instrumentation; Orthopedics--Human
Medicine, Medical Sciences

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, **Vertebrata** ,
Chordata, Animalia

ORGANISMS: human (Hominidae)

ORGANISMS: PARTS ETC: thoraco-lumbar disc--skeletal system

COMMON TAXONOMIC TERMS: Animals; Chordates; Humans; Mammals; Primates;
Vertebrates

METHODS & EQUIPMENT: disc **prosthesis** --prosthetic

CONCEPT CODES:

10511 Biophysics - Bioengineering

18004 Bones, joints, fasciae, connective and adipose tissue - Physiology
and biochemistry

18006 Bones, joints, fasciae, connective and adipose tissue - Pathology

BIOSYSTEMATIC CODES:

86215 Hominidae

?

Set	Items	Description
S1	30401	SPINE OR SPINAL? OR VERTEBRA? OR INTERVERTEBRA?
S2	24928	ENDPLATE? OR END()PLATE? ?
S3	162897	PROSTHE? OR IMPLANT? OR ENDOPROSTHE?
S4	3786303	REMOV? OR EXTRACT? OR SHAPE? ? OR SHAPING
S5	1433614	REAM??? OR MILL OR MILLS OR MILLED OR MILLER? ? OR MILLING OR BORE? ? OR BORING OR CUT OR CUTS OR CUTTING OR DRILL??? OR SCRAPE? ? OR SCRAPING
S6	192530	SCRAPE? ? OR SCRAPING? OR SHAVE? ? OR SHAVING? OR ABRAD? ? OR ABRADING? OR ABRASION?
S7	129916	CONCAV? OR (CURVE? ? OR CURVING OR ROUND??? OR HOLLOW??? OR ARCH OR ARCHED OR ARCHING OR ARC OR ARCS OR ARCING OR ARCED) - (2N) (INWARD? OR DOWNWARD?)
S8	108813	CONVEX? OR (CURVE? ? OR CURVING OR ROUND??? OR BULGE? ? OR BULGING OR ARCH OR ARCHED OR ARCHING OR ARC OR ARCS OR ARCING OR ARCED) (2N) (OUTWARD? OR UPWARD?)
S9	2475304	RESILIENT? OR PLASTIC? OR THERMOPLASTIC? OR POLYMER? OR VIS- COELASTIC? OR VISCO()ELASTIC? OR HYDROGEL? OR HYDRO()GEL
S10	2697441	BODY OR BODIES OR DISC OR DISCS OR DISK OR DISKS
S11	478129	IC=(A61B? OR A61F? OR A61D? OR A61M?)
S12	64667	BONE OR BONES OR BONEY OR BONED OR OSSEOUS? OR OSTEOAL?
S13	6482	S12(3N) (S4:S6)
S14	53570	S9(5N)S10
S15	0	S1:S2 AND S3 AND S13 AND S7 AND S8 AND S14
S16	6	S1:S2 AND S3 AND S13 AND S7 AND S8
S17	30	S3 AND S13 AND S7 AND S8
S18	24	S17 NOT S16
S19	9	S18 NOT PY=1995:2006
S20	11	S3 AND S13 AND S7:S8 AND S1:S2
S21	5	S20 NOT (S16 OR S18)
S22	70	S3 AND S13 AND S7:S8
S23	61	S22 AND S11
S24	10	S23 NOT (S16 OR S18 OR S21 OR PY=1995:2006)
S25	0	S22 AND S14
S26	2068	S12(5N)S1:S2
S27	16	S26 AND S3 AND S7 AND S8
S28	0	S27 NOT (S16 OR S18 OR S21 OR S24 OR PY=1995:2006)
S29	63	S26 AND S3 AND S7:S8
S30	0	S29 NOT (S16 OR S18 OR S21 OR S24 OR PY=1995:2006)
S31	860	S26 AND S3
S32	720	S31 AND S11
S33	317	S1:S2(5N)S7:S8
S34	21	S33 AND (S26 OR S13) AND S3
S35	0	S34 NOT (S16 OR S18 OR S21 OR S24 OR PY=1995:2006)
S36	57	S33 AND S3
S37	57	S36 AND S11
S38	4	S37 NOT (S16 OR S18 OR S21 OR S24 OR PY=1995:2006)
S39	9	S1:S2 AND S3 AND S4:S6 AND S7 AND S8 AND S9 AND S10 AND S12
S40	0	S39 NOT (S16 OR S18 OR S21 OR S24 OR S38 OR PY=1995:2006)
S41	1212209	CURVE? ? OR CURVING OR ROUND??? OR HOLLOW??? OR ARCH OR AR- CHED OR ARCHING OR ARC OR ARCS OR ARCING OR ARCED OR SPHERE? ? OR SPHERICAL? OR HEMISPHER?
S42	23	S1:S2 AND S3 AND S13 AND S41
S43	1	S42 NOT (S16 OR S18 OR S21 OR S24 OR S38 OR PY=1995:2006)
S44	290	S3 AND S13 AND S41
S45	240	S44 AND S11
S46	1756	S41 (5N) S3
S47	62	S13 AND S46
S48	26	S47 NOT (S16 OR S18 OR S21 OR S24 OR S38 OR S43 OR PY=1995- :2006)

(c) 2006 JPO & JAPIO
File 350:Derwent WPIX 1963-2006/UD,UM &UP=200612
(c) 2006 Thomson Derwent

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19/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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009224215 **Image available**

WPI Acc No: 1992-351637/199243

XRPX Acc No: N92-268102

**Interchangeable component for wrist joint prosthesis - comprises
conical threaded shaft for screwed-embedding into major bone of wrist,
with removable hemispherical head forming bearing surface for joint**

Patent Assignee: HERZBERG G (HERZ-I); RAMBERT A (RAMB-I)

Inventor: HERZBERG G; RAMBERT A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2673100	A1	19920828	FR 912573	A	19910227	199243 B

Priority Applications (No Type Date): FR 912573 A 19910227

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2673100	A1		16	A61F-002/42	

Abstract (Basic): FR 2673100 A

The **prosthesis** includes a first component (20) which is **implantable** in the major wrist bone (10) by means of a threaded conical shaft (21). The end of the shaft not embedded in the bone supports a hemispherical head (22) formed of rigid material.

The surface of the hemispherical head has a very low coefficient of friction, and forms the **convex** articulation surface of the joint. The head engages against a natural or **prosthetic concave** surface of the end of the radius **bone**, and is **removable** from the supporting conical shaft.

ADVANTAGE - Ease of adaptation to suit different sizes of bone and extents of joint replacement.

Dwg.2/3

Title Terms: INTERCHANGE; COMPONENT; WRIST; JOINT; **PROSTHESIS** ; COMPRISE;
CONICAL; THREAD; SHAFT; SCREW; EMBED; MAJOR; BONE; WRIST; REMOVE;
HEMISPHERICAL; HEAD; FORMING; BEARING; SURFACE; JOINT

Derwent Class: P32

International Patent Class (Main): A61F-002/42

File Segment: EngPI

19/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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009150741 **Image available**

WPI Acc No: 1992-278179/199234

XRPX Acc No: N92-212755

**Artificial implants form of femoral component for hip replacement - has
tail section with convex lateral and medial surfaces of same dia.
extending to head end**

Patent Assignee: AESCULAP LTD (AESC-N)

Inventor: FIELD R E

Number of Countries: 015 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 499480	A1	19920819	EP 92301228	A	19920214	199234 B

Priority Applications (No Type Date): GB 913248 A 19910215
Cited Patents: EP 135755; EP 363151; FR 2602672; FR 2636837; FR 2638962; FR 2639821

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 499480 A1 E 7 A61F-002/36

Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL PT SE

Abstract (Basic): EP 499480 A

The femoral component has a tail (distal) section (2) having transversely **convex** lateral (3) and medial (4) surfaces of the same diameter, extending to a head end (proximal) part (5) having first and second sections (6, 7). The first and second sections (6, 7) have a transversely **convex** lateral surface (8) the apexes of which are coplanar with the apex of the lateral surface (4) of the tail section. The diameter of lateral surface (8) of the first section (6) progressively increases to the second section (7).

The lateral surface of which is of constant diameter from its junction with the first section to the end (9) of the component. The medial surfaces (10, 11) of the first and second sections (6, 7) each are continuously longitudinal **concave** and laterally **convex**. Side surfaces (12, 13) of the first and second sections (6, 7) is tangentially to the **convex** lateral surfaces (8) and with the angle of the tangent over the first section (6) progressively decreasing in the direction towards the second section (7).

ADVANTAGE - Keeps to a minimum the **removal** of healthy **bone** from within the proximal end of the femur and yet have a component located within the cavity of sufficient bulk to withstand all loads imposed during normal activities undertaken by the patient, so as to prevent movement of the **implant** by rotation or subsidence that would lead to pain and eventual failure by loosening at the **implant** /bone interface.

Title Terms: ARTIFICIAL; **IMPLANT** ; FORM; FEMORAL; COMPONENT; HIP; REPLACE; TAIL; SECTION; **CONVEX** ; LATERAL; MEDICAL; SURFACE; DIAMETER; EXTEND; HEAD; END

Derwent Class: P32

International Patent Class (Main): A61F-002/36

International Patent Class (Additional): A61F-002/30

File Segment: EngPI

19/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004803172

WPI Acc No: 1986-306513/198647

XRAM Acc No: C86-132689

XRPX Acc No: N86-229006

Thin walled prosthetic implants for toe joints - pref. of polyfluorocarbon resin fibre or inert metal alloy

Patent Assignee: LELIEVRE J F (LELI-I); MEDICALEX SOC ANON (MEDI-N)

Inventor: LELIEVRE J F; LEVY A

Number of Countries: 010 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 201651	A	19861120	EP 85400958	A	19850515	198647 B
EP 201651	B	19900404				199014
DE 3576911	G	19900510				199020

Priority Applications (No Type Date): EP 85400958 A 19850515
Cited Patents: 1.Jnl.Ref; DE 2852738; FR 2094904; US 4156296; US 4231121;
US 4242759; WO 7900739

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 201651	A	F	13		
Designated States (Regional): AT BE CH DE GB IT LI NL SE					
EP 201651	B	F			
Designated States (Regional): AT BE CH DE GB IT LI LU NL SE					

Abstract (Basic): EP 201651 A

Prosthetic implants for joints between metatarsal and phalangeal bones in the foot comprise thin shells with complementary **convex** and **concave** surfaces respectively and are secured by a supporting pin or a cylindrical skirt fitted to a machined stump and opt. secured by a steel wire. Pref. the **implants** are made of a fluorocarbon resin, bonded carbon fibres, and/or a physiologically inert metal alloy such as stainless steel or a Co-Mb-Cr alloy (RTM-'Vitallium'). Typically the insert sections are 0.5 to 3mm thick. A cutting tool is described for machining to accept.

USE/ADVANTAGE - To improve or restore movement to joints affected by e.g. arthritis. Better wear-resistance than silicone resin based **implants**. Induces less stress and associated lysis damage to the bone than use of **implants** with screwed anchorages. Lighter and cheaper than solid ball and socket **implant** profiles and require less **removal** of original **bone** for their installation.

Title Terms: THIN; WALL; **PROSTHESIS** ; **IMPLANT** ; TOE; JOINT; PREFER;
POLYFLUOROCARBON; RESIN; FIBRE; INERT; METAL; ALLOY

Derwent Class: A14; A96; D22; P32

International Patent Class (Additional): A61F-002/42

File Segment: CPI; EngPI

19/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004332294

WPI Acc No: 1985-159172/198526

XRPX Acc No: N85-120012

Socket for hip joint prosthesis - has anchoring part for securing in bone by open-end cylindrical member

Patent Assignee: PROTEK AG (PROT-N); SUTTER F (SUTT-I)

Inventor: MULLER M E; STRAUMANN F

Number of Countries: 013 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 8502535	A	19850620	WO 84CH194	A	19841211	198526 B
EP 165947	A	19860102	EP 85900037	A	19850000	198602
JP 61500708	W	19860417				198622
CH 662267	A	19870930				198742
EP 165947	B	19880210				198806
DE 3469271	G	19880317				198812
CA 1239251	A	19880719				198834

Priority Applications (No Type Date): CH 836714 A 19831216

Cited Patents: DE 2823306; DE 3006179; DE 3205526; FR 2310121

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 8502535 A G 46
Designated States (National): JP US
Designated States (Regional): AT BE CH DE FR GB LU NL SE
EP 165947 A G
Designated States (Regional): AT BE CH DE FR GB LI LU NL SE
EP 165947 B G
Designated States (Regional): AT BE CH DE FR GB LI LU NL SE

Abstract (Basic): WO 8502535 A

The **prosthesis** socket has a **concave** hemispherical inner surface formed by a plastics shell (11). The latter is anchored in the bone by a cylindrical member (17) which has one end attached to the shell.

The end section of the member, opposite to the end fixed to the shell, is open. The centre line (23) of the cylindrical member passes through the centre (21) of the hemispherical plastics shell and the shell has a rotation symmetrical shape about the centre line.

ADVANTAGE - Reliable socket anchoring with reduced amount of **bone removal** .

2/20

Title Terms: SOCKET; HIP; JOINT; **PROSTHESIS** ; ANCHOR; PART; SECURE; BONE; OPEN; END; CYLINDER; MEMBER

Derwent Class: P32

International Patent Class (Additional): A61F-002/34

File Segment: EngPI

19/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004326896

WPI Acc No: 1985-153774/198526

XRPX Acc No: N85-116096

Bone **cement** boring instrument - has cutter with non-abrasive guide shank at end of boring bar

Patent Assignee: SCHMIDBERGER G (SCHM-I)

Inventor: SCHMIDBERG G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3404123	A	19850620	DE 3404123	A	19840207	198526 B

Priority Applications (No Type Date): DE 3400782 A 19840112; DE 3344590 A 19831209; DE 3404123 A 19840207

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
DE 3404123	A	22		

Abstract (Basic): DE 3404123 A

The instrument forms a **bore** in **bone cement**, e.g. to anchor an **endoprosthesis** , having a drive unit (1) to which a rotary boring bar (2) is secured. At the end of the bar is a drill or milling cutter (3) with a non-abrasive guide shank (6) and cutting edges (9) at the end furthest from the bar.

The shank can be of roughly the same diameter as the bar. The cutter can be rigidly secured to it or alternatively detachable Its end face can be **convex** or **concave** .

USE - Particularly for replacement operations, giving accurate guidance of the cutter even at great depths,

1/4

Title Terms: BONE; CEMENT; BORE; INSTRUMENT; CUT; NON; ABRASION; GUIDE;
SHANK; END; BORE; BAR
Derwent Class: P32
International Patent Class (Additional): A61F-001/00
File Segment: EngPI

19/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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003077972

WPI Acc No: 1981-H8012D/198134

Acetabular hip prosthesis retained by osseous invasion - has visor shaped part facing head of femur and integral wedge shaped part defining retaining teeth

Patent Assignee: KOVALEVA I D (KOVA-I); SARAT TRAUMATOLOGY (SATR-R)

Inventor: POTEKHIN V F; TYSCHENKO L A

Number of Countries: 004 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2068734	A	19810819				198134 B
DE 3007548	A	19810910				198138
FR 2476479	A	19810828				198140
US 4298993	A	19811110				198148
DE 3007548	C	19830922				198339
GB 2068734	B	19831123				198347

Priority Applications (No Type Date): GB 804008 A 19800206

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2068734	A		4		

Abstract (Basic): GB 2068734 A

The **endoprosthesis** comprises the visor-shaped part (1) curved longitudinally and transversely so as to form a **concave** surface (2) which faces the head of the femur, and a wedge-shaped part (3) integral with the visor-shaped part and curved both longitudinally and transversely so as to form a **convex** surface (4), a **concave** surface and a crescent-shaped base (6). The **concave** surfaces of the visor and wedge parts pass smoothly into each other.

Through holes (7) are provided in the wedge-shaped part to accommodate **osseous** invasion. and a number of slots (8) are provided in the thin end so as to form teeth (10). Further holes (12) are provided for fixing screws.

1,2

Title Terms: ACETABULUM; HIP; **PROSTHESIS** ; RETAIN; OSSEOUS; INVADE; VISOR; SHAPE; PART; FACE; HEAD; FEMUR; INTEGRAL; WEDGE; SHAPE; PART; DEFINE; RETAIN; TOOTH

Derwent Class: P32

International Patent Class (Additional): A61F-001/03

File Segment: EngPI

19/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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001830824

WPI Acc No: 1977-51819Y/197729

Artificial knee joint e.g. to replace cartilage - comprising hard plastic bearing members for condyles of femur with metal plates for tibia

Patent Assignee: UNIV TORONTO (UTOR)

Number of Countries: 003 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4034418	A	19770712				197729 B
CA 1045752	A	19790109				197905
GB 1542714	A	19790321				197912

Priority Applications (No Type Date): CA 227803 A 19750526

Abstract (Basic): US 4034418 A

An artificial knee joint, consists of an arcuate bearing member for fixing to the condyle of the femur, and a bearing plate with shallow **concave** bearing surface, for fixing to the tibia.

The bearing surface of the bearing member is arcuate polycentred in the sagittal plane and **convexly** curved in the coronal plane. A flange of this member is designed for insertion in a groove cut in the condyle. The flange has three planar load supporting surfaces which are spaced at different angles to the coronal plane.

The joint may be used for joints where the constraints on movement will be provided by the natural ligaments of the knee, e.g. as partial **prosthesis** in case of cartilage removal for arthritic condition. Amt. of **bone removal** is small. this reduces operating time and allows scope for corrections at later date. The joint will perform satisfactorily over a long period.

Title Terms: ARTIFICIAL; KNEE; JOINT; REPLACE; CARTILAGE; COMPRISE; HARD; PLASTIC; BEARING; MEMBER; CONDYLE; FEMUR; METAL; PLATE; TIBIA

Derwent Class: A96; P32

International Patent Class (Additional): A61F-001/24

File Segment: CPI; EngPI

19/5/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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001324639

WPI Acc No: 1975-L8564W/197544

Joint renewal prosthesis for surgical implantation - consists of two sections one concave the other convex made of stainless steel and polyethylene

Patent Assignee: NAT RES DEV CORP (NATR)

Number of Countries: 004 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2515259	A	19751023				197544 B
US 3965489	A	19760629				197628
CH 591846	A	19770930				197741
GB 1507026	A	19780412				197815

Priority Applications (No Type Date): GB 7416182 A 19740411

Abstract (Basic): DE 2515259 A

A **prosthesis** to renew the foot-leg joint consists of two parts, an upper portion with joint surface of **convex** design with a ribbed **implantation** seating with a cavity. The lower portion has a **concave** bearing surface and a similar **implantation** seating. One of the **prosthesis** joint components is manufactured from stainless steel and

the other from an extremely high molecular weight polyethylene material.
Implantation is by surgical operation involving **bone shaping**. The wider ends of the ribs have open recesses in a radial direction, which from an axial view point assume a bifurcated configuration.

Title Terms: JOINT; RENEW; **PROSTHESIS**; SURGICAL; **IMPLANT**; CONSIST; TWO; SECTION; ONE; **CONCAVE**; **CONVEX**; MADE; STAINLESS; STEEL; POLYETHYLENE

Derwent Class: P31; P32

International Patent Class (Additional): A61B-001/24; A61F-001/00

File Segment: EngPI

19/5/9 (Item 9 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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001200145

WPI Acc No: 1974-74034V/197442

Partial prosthesis for human tarsal joint - comprises plastics and metallic member anchored in tibia and talus

Patent Assignee: WALDEMAR LINK (LINK-I)

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 3839742	A	19741008				197442 B
DE 2236141	B	19760708				197629

Priority Applications (No Type Date): DE 2236141 A 19720722

Abstract (Basic): US 3839742 A

The **prosthesis** comprises two members, one of pref. high-molecular polyethylene anchored in the tibia head, and the other of metallic material anchored in the talus, so that the exposed surfaces face one another. The two members are anchored by fastening trapezoidal-shaped projections on the members to the bones, and, in this way, do not damage or change the **shape** of the **bones**. The plastics member has an exposed **concave** surface, and the metallic members has an exposed **convex** surface, which two surfaces interengage with at most time contact to stiffen the tarsal joint and thereby relieve the pain of arthritis sufferers.

Title Terms: **PROSTHESIS**; HUMAN; JOINT; COMPRISE; PLASTICS; METALLIC; MEMBER; ANCHOR; TIBIA; TALUS

Derwent Class: A96; P32

International Patent Class (Additional): A61F-001/24

File Segment: CPI; EngPI

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24/5/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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009335550

WPI Acc No: 1993-029013/199304

XRPX Acc No: N93-022150

Three-part prosthesis for femur-to-knee joint - having femoral and patellar components shaped to provide matched rubbing surfaces, with intermediate component linking to femur

Patent Assignee: VIALLA J (VIAL-I)

Inventor: VIALLA J-M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2676641	A1	19921127	FR 9015187	A	19901129	199304 B

Priority Applications (No Type Date): FR 9015187 A 19901129

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2676641	A1		13	A61F-002/38	

Abstract (Basic): FR 2676641 A

The femoral component (1) has a perfectly smooth lower face, trapezium-shaped, with a **concave** central part and curved edges (12,13). Its upper face comprises two flat surfaces (16,18) perpendicular to one another and connected by a small inclined face (17).

The patellar component comprises a spherical cap with two cylindrical pins projecting from its inner surface to engage in two complementary holes bored in the kneecap. An ancillary component has a pair of holes corresponding to pins (19) projecting from the inner face of the femoral component, with which it is shaped to cooperate closely.

.18

ADVANTAGE - Improved imitation of properties of natural joint, with reduced **bone removal** requirement.

Dwg.2/6

Title Terms: THREE; PART; **PROSTHESIS** ; FEMUR; KNEE; JOINT; FEMORAL; COMPONENT; SHAPE; MATCH; RUBBING; SURFACE; INTERMEDIATE; COMPONENT; LINK; FEMUR

Derwent Class: P32

International Patent Class (Main): **A61F-002/38**

File Segment: EngPI

24/5/2 (Item 2 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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008679625

WPI Acc No: 1991-183645/199125

XRPX Acc No: N91-140551

Lower-limb- prosthesis bearing element - has elastic cushion with spherically concave surface and through apertures

Patent Assignee: UKR PROSTHESIS RES (UPRO-R)

Inventor: RYBKA E V; VATOLINSKI L E; ZARUDNYI S S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1598999	A	19901015	SU 4463709	A	19880719	199125 B

Priority Applications (No Type Date): SU 4463709 A 19880719

Abstract (Basic): SU 1598999 A

Elastic cushion (2) of the proposed bearing element has spherically **concave** surface (4), spherical hollow (5) at distal end face (6) and through apertures (3). Concentric slot (7) is designed in distal end face (6) of elastic cushion (2), housing ring (8).

USE/ADVANTAGE - Improves the blood supply and reduces the atrophy of the soft tissues in the zone of the **osseous cut** of the stump, by individual redistribution of pressure between the peripheral region of its end face and the **osseous cut**. Bul. 38/15.10.90 (3pp Dwg.No.1/2)

Title Terms: LOWER; LIMB; **PROSTHESIS** ; BEARING; ELEMENT; ELASTIC; CUSHION; SPHERE; **CONCAVE** ; SURFACE; THROUGH; APERTURE

Derwent Class: P32

International Patent Class (Additional): **A61F-002/00**

File Segment: EngPI

24/5/3 (Item 3 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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008675247 **Image available**

WPI Acc No: 1991-179267/199125

XRAM Acc No: C91-077352

XRPX Acc No: N91-137385

Artificial joint prosthesis inserted in long bone - has curved shaft with memory effect properties to strengthen anchorage

Patent Assignee: ZAHEDI A (ZAHE-I)

Inventor: ZAHEDI A

Number of Countries: 016 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4039563	A	19910613	DE 4039563	A	19901207	199125 B
WO 9108721	A	19910627				199128
EP 504189	A1	19920923	WO 90DE952	A	19901207	199239
			EP 91900009	A	19901207	
EP 504189	B1	19940126	WO 90DE952	A	19901207	199404
			EP 91900009	A	19901207	
DE 59004451	G	19940310	DE 504451	A	19901207	199411
			WO 90DE952	A	19901207	
			EP 91900009	A	19901207	

Priority Applications (No Type Date): DE 3940774 A 19891207; DE 4039563 A 19901207

Cited Patents: EP 229578; EP 311208; FR 2610823; US 4778474

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9108721	A				
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Designated States (National): JP US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LU NL SE

EP 504189	A1	G	30	A61F-002/36	Based on patent WO 9108721
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Designated States (Regional): AT CH DE FR GB IT LI

EP 504189	B1	G	12	A61F-002/36	Based on patent WO 9108721
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Designated States (Regional): AT CH DE FR GB IT LI

DE 59004451	G			A61F-002/36	Based on patent EP 504189
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Based on patent WO 9108721

Abstract (Basic): DE 4039563 A

An artificial joint element whose elongated shaft (e.g. 9) is

inserted in the terminal cavity of a long bone, formed e.g. by **removing** marrow from the **bone** end, has at least part of the shaft formed of 'memory effect' material which resumes its original shape under the effect of heat, in this case at most only slightly exceeding body heat. The material is a bio-compatible alloy esp. Ti-Ni-Co or a plastic, esp. polychloroprene or ethylene-propylene rubber. The shaft, **convexly** curved, may have slots engaged by corresp. projections from the bone.

ADVANTAGE - Provides secure anchorage and ready adaptation to individual patient. (11pp Dwg.No.8/16
Title Terms: ARTIFICIAL; JOINT; **PROSTHESIS** ; INSERT; LONG; BONE; CURVE; SHAFT; MEMORY; EFFECT; PROPERTIES; STRENGTH; ANCHOR
Derwent Class: A18; A28; A96; D22; P32; P34
International Patent Class (Main): **A61F-002/36**
International Patent Class (Additional): A61L-027/00
File Segment: CPI; EngPI

24/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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004424351
WPI Acc No: 1985-251229/198541
XRPX Acc No: N85-187907

Prosthetic **metatarsal-phalangeal joint** - has socket and cap with curved **cartilage substitution surfaces mounted to face each other**

Patent Assignee: LELIEVRE J F (LELI-I)
Inventor: LELIEVRE J F
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2560039	A	19850830	FR 8318285	A	19831117	198541 B

Priority Applications (No Type Date): FR 8318285 A 19831117

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2560039	A		9		

Abstract (Basic): FR 2560039 A

The **prosthetic** joint insert has a phalangeal section (1) which has a cylindrical socket (2). The socket base (3) has a **concave** lower face to act as a cartilage substitute. The sidewall of the socket is inserted into a recess **cut** into the phalangeal **bone** (8).

A corresponding metatarsal insert (5) has a segmental cap (6) to form a substitute cartilage surface. The cap has a truncated-cylindrical mounting surface (7).

ADVANTAGE - Allows accurate positioning of **prosthesis** .

3/4

Title Terms: **PROSTHESIS** ; METATARSAL; PHALANX; JOINT; SOCKET; CAP; CURVE; CARTILAGE; SUBSTITUTE; SURFACE; MOUNT; FACE
Derwent Class: P32
International Patent Class (Additional): **A61F-002/42**
File Segment: EngPI

24/5/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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003366113

WPI Acc No: 1982-M4140E/198238

Prosthesis for replacement of elbow joint - has arcuate ulnar component with attachment stem and cooperating with arcuate concave articular surface of humeral component

Patent Assignee: WADSWORTH T G (WADS-I)

Inventor: WADSWORTH T G

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2094639	A	19820922				198238 B
GB 2094639	B	19830316				198311

Priority Applications (No Type Date): GB 828475 A 19810316

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2094639	A		12		

Abstract (Basic): GB 2094639 A

The elbow replacement **prosthesis** comprises an arcuate ulnar component (8) having an articular surface (44) and an arcuate keel (48) extending along it. An intramedullary stem (52) depends from the keel. The dimension of the keel in a coronal plane is much less than that of the articular surface. The keel can fit into the olecranon fossa with minimal **bone removal**.

The humeral component of the **prosthesis** has a **concave** articular surface with a longitudinal U-shaped slot. Curved grooves are formed in the walls transverse to the slot to assist in cementing the component to the prepared bone surface.

1/22

Title Terms: **PROSTHESIS** ; REPLACE; ELBOW; JOINT; ARCUATE; ULNA; COMPONENT; ATTACH; STEM; COOPERATE; ARCUATE; **CONCAVE** ; ARTICULAR; SURFACE; HUMERUS; COMPONENT

Derwent Class: P32

International Patent Class (Additional): **A61F-001/03**

File Segment: EngPI

24/5/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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002121597

WPI Acc No: 1979-E1524B/197919

Artificial hip joint with implant portion - includes metal and plastics cup portions to retain spherical member forming ball joint

Patent Assignee: INDONG O H (INDO-I)

Inventor: HARRIS W H; OH I

Number of Countries: 004 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2845231	A	19790503				197919 B
GB 2007980	A	19790531				197922
FR 2406433	A	19790622				197930
GB 2007980	B	19820721				198229
CH 637286	A	19830729				198332

Priority Applications (No Type Date): US 77844362 A 19771021

Abstract (Basic): DE 2845231 A

An artificial joint for a part of the body, such as the hip joint is formed by making a **concave** recess in the hip **bone** (10), then **boring** two holes from the inside of this recess for screws (36) to hold a metal cup shaped member (32) with a corrugated surface inside.

Into this is inserted a further cup shaped member (48) of plastics material assisted by locating recesses (46) around the periphery. The ball joint is then completed by attaching a spherical member (60) made of the same metal as the first cup shaped member to the end of the bone (12). This has a rod (72) extending from its hollow interior which passes through a hole through the bone and is then secured by a screw (96) through a sleeve (82). This forms an **implant**.

Title Terms: ARTIFICIAL; HIP; JOINT; **IMPLANT** ; PORTION; METAL; PLASTICS; CUP; PORTION; RETAIN; SPHERE; MEMBER; FORMING; BALL; JOINT

Derwent Class: P32

International Patent Class (Additional): **A61F-001/00**

File Segment: EngPI

24/5/10 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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001436387

WPI Acc No: 1975-86136W/197552

Thumb metacarpal joint trapezium prosthesis - of elastomer with tapered end and integral cylindrical section with tendon attachment hole

Patent Assignee: EATON R E (EATO-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 3924276	A	19751209				197552 B

Priority Applications (No Type Date): US 75550173 A 19750218

Abstract (Basic): US 3924276 A

A trapezium **prosthesis** for the thumb metacarpal joint comprises an integral elastomeric member with a cylindrical section, an elongated tapered end, and a transverse aperture through the cylindrical section longitudinal axis. The elastomer is pref. silicone rubber, the tapered end is of annular cross-section and has a blunt end, and the opposite end of the cylindrical section is slightly **concave** to conform to the navicular bone end. The tapered end is pref. fitted into the reamed medullary canal of the thumb meta-carpal **bone** after **removing** the trapezium, 6 cm. of the flexor carpi radialis tendon is stripped away, the split tendon is passed around the **prosthesis** and through the aperture and is sutured to the tendon, then the remaining free end is woven around the **prosthesis** to form a new capsul.

Title Terms: THUMB; METACARPAL; JOINT; TRAPEZIUM; **PROSTHESIS** ; ELASTOMER; TAPER; END; INTEGRAL; CYLINDER; SECTION; TENDON; ATTACH; HOLE

Derwent Class: A96; P32

International Patent Class (Additional): **A61F-001/24**

File Segment: CPI; EngPI

?

24/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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007449974 **Image available**

WPI Acc No: 1988-083908/198812

XRPX Acc No: N88-063677

Prosthetic bone or tooth implant - comprises U-shape cap conforming to contour of osteotome blade, to lay flush against bone surface when fitted

Patent Assignee: COMPARETTO J E (COMP-I)

Inventor: COMPARETTO J E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4728330	A	19880301	US 81270467	A	19810604	198812 B

Priority Applications (No Type Date): US 7932311 A 19790423; US 77763623 A 19770128; US 81270467 A 19810604

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4728330	A		9		

Abstract (Basic): US 4728330 A

The prosthetic bone or tooth implant includes a U-shaped cap portion (69) with an upper convex surface. The implant is used in bone prosthesis after an osteotomy is performed by an elongated osteotome (30) having a blade comprised of at least one curved portion (38) and at least one flange portion (42). The underside of the U-shaped cap conforms identically to the shape of the osteotome blade, so that when the device is implanted its lower surface will lay perfectly flush against the surface of the bone which has been cut .

The implant is affixed to the bone by a pin (62) connected at one end to the underside of the implant , which is inserted at its other end into the medullary canal (55) within the bone which has been severed. To permit the implant to be used even when the osteotomy is angular, the pin is connected to the cap of the implant by a ball (67) and socket joint, a universal hinge or an integral hinge which utilises its natural flexibility to swing the cap to a variety of implant positions.

USE - Prosthetic bone implant which can fit perfectly flush over an osteotomy.

8/24

Title Terms: PROSTHESIS ; BONE; TOOTH; IMPLANT ; COMPRISE; U-SHAPED; CAP; CONFORM; CONTOUR; BLADE; LAY; FLUSH; BONE; SURFACE; FIT

Derwent Class: P32

International Patent Class (Additional): A61F-002/28

File Segment: EngPI

?

38/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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008644466 **Image available**
WPI Acc No: 1991-148496/199120
XRPX Acc No: N91-114023

Disc-shaped vertebral implant spacer - has peripheral concave groove and central boss each side, enclosed by concentric rings of sloping sided ribs

Patent Assignee: FUHRMANN G (FUHR-I); GROSS U (GROS-I); KADEN B (KADE-I); SCHMITZ H (SCHM-I)

Inventor: FUHRMANN G; GROSS U; KADEN B; SCHMITZ H

Number of Countries: 017 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9105521	A	19910502				199120 B
EP 497803	A1	19920812	EP 90915406	A	19901023	199233
			WO 90DE819	A	19901023	
EP 497803	B1	19931222	EP 90915406	A	19901023	199351
			WO 90DE819	A	19901023	
DE 59003981	G	19940203	DE 503981	A	19901023	199406
			EP 90915406	A	19901023	
			WO 90DE819	A	19901023	
US 5306308	A	19940426	WO 90DE819	A	19901023	199416
			US 92848955	A	19920423	

Priority Applications (No Type Date): DE 89U12648 U 19891023

Cited Patents: CH 672589; DE 2263842; DE 2804936; US 4863477; US 4865603;
WO 9000037

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9105521	A				Designated States (National): CA FI SU US Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LU NL SE
EP 497803	A1	G	28	A61F-002/44	Based on patent WO 9105521 Designated States (Regional): DE FR GB
EP 497803	B1	G	12	A61F-002/44	Based on patent WO 9105521 Designated States (Regional): DE FR GB
DE 59003981	G			A61F-002/44	Based on patent EP 497803 Based on patent WO 9105521
US 5306308	A		9	A61F-002/44	Based on patent WO 9105521

Abstract (Basic): WO 9105521 A

The disc-shaped spacer is inserted between two adjacent **vertebrae** and has a **concave** groove round its edge, between its top and bottom surfaces. Each surface has a , part-spherical protuberance (3) concentrically surrounded by roof-shaped ribs (5). Each set of ribs form a circle, and the concentric circles increase in from the centre outwards.

The ribs of each set are separated by flat radial grooves. Each rib has two sloping long sides and two sloping short ends (11). The dia. of the disc matched the size of the vertebrae.

ADVANTAGE - No micromotion twist, and long term, secure anchoring.
Dwg.3/5

Title Terms: DISC; SHAPE; VERTEBRA; **IMPLANT** ; SPACE; PERIPHERAL; CONCAVE; GROOVE; CENTRAL; BOSS; SIDE; ENCLOSE; CONCENTRIC; RING; SLOPE; SIDE; RIB

Derwent Class: P32

International Patent Class (Main): **A61F-002/44**

File Segment: EngPI

38/5/2 (Item 2 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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004591848
WPI Acc No: 1986-095192/198615
XRAM Acc No: C86-040497
XRPX Acc No: N86-069768

Intervertebral disc prosthesis of sandwich structure - with two pref. metal plates and intermediate disc esp. of polyethylene giving limited pivotal movement

Patent Assignee: BUETTNER-JANZ K (BUET-I); DERR B (DERR-I); HELISCH H (HELI-I); SCHELLNACK K (SCHE-I); ERKEL K (ERKE-I); SCHUMANN R (SCHU-I); HUMBOLDT-UNIV BERLIN (UYBE); UNIV BERLIN HUMBOLDT (UYBE)
Inventor: BUETTNER-JANZ K; DERR B; HELISCH H; SCHELLNACK K; ERKEL K; SCHUMANN R; BUTTNERJAN K; ERKEL K P; HELISCH H J
Number of Countries: 012 Number of Patents: 014
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 176728	A	19860409	EP 85110319	A	19850817	198615 B
DE 3529761	A	19860703	DE 3529761	A	19850820	198628
DD 234609	A	19860409				198632
DD 239523	A	19861001				198705
DD 239524	A	19861001				198705
DD 248018	A	19870729				198750
US 4759766	A	19880726	US 8796314	A	19870909	198832
DD 234609	B	19880504				198838
EP 176728	B	19890726				198930
CA 1263201	A	19891128				199001
DD 239524	B3	19930218	DD 278793	A	19850719	199316
DD 239523	B3	19930401	DD 278792	A	19850719	199322
JP 6105856	A	19940419	JP 85194012	A	19850904	199420
			JP 935315	A	19850904	
DE 3529761	C2	19940616	DE 3529761	A	19850820	199422

Priority Applications (No Type Date): DD 278793 A 19850719; DD 266959 A 19840904; DD 273192 A 19850212; DD 278792 A 19850719
Cited Patents: CH 624573; DE 2263842; DE 3023353

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 176728	A	G	20		
Designated States (Regional): AT CH FR GB LI NL SE					
EP 176728	B	G			
Designated States (Regional): AT CH FR GB LI NL SE					
JP 6105856	A		6	A61F-002/44	Div ex application JP 85194012
DE 3529761	C2		10	A61F-002/44	
DD 239524	B3			A61F-002/44	
DD 239523	B3			A61F-002/44	

Abstract (Basic): EP 176728 B

A **prosthesis** for an intervertebral disc comprises two plates (1) with a spacer disc (4) between them. The plates each have a concave centre (1) and flat annular rim (2), pref. upwardly cranked at its edge and carrying spikes (3). The spacer, of suitable depth has a convex centre (4) and a flat rim with annular groove (6).

Prefd. materials are: plates, non-corroding metal; spacer disc medicinal polyethylene. Bioactive ceramics or polyurethanes can also be used. Radiological markers may be used.

USE/ADVANTAGE - As a **prosthesis** for an intervertebral disc. Remains firmly in place. Permits natural movement of the spine. (20pp

Dwg.No.1a+2/14)
Title Terms: INTERVERTEBRAL; DISC; **PROSTHESIS** ; SANDWICH; STRUCTURE; TWO;
PREFER; METAL; PLATE; INTERMEDIATE; DISC; POLYETHYLENE; LIMIT; PIVOT;
MOVEMENT
Derwent Class: A96; D22; P32
International Patent Class (Main): **A61F-002/44**
File Segment: CPI; EngPI

38/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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003384833
WPI Acc No: 1982-P2869E/198244
Implant for correction of spine curvature - comprises curved bar with
toothed fixings securing to spine via adjustable threaded rod
Patent Assignee: RODNJANSKI L L (RODN-I)
Inventor: GUPALOV V K; RODNJANSKI L L
Number of Countries: 004 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3114872	A	19821028	DE 3114872	A	19810413	198244 B
GB 2109238	A	19830602	GB 8134169	A	19811112	198322
FR 2516788	A	19830527				198326
US 4448191	A	19840515	US 81281165	A	19810707	198422
GB 2109238	B	19850403				198514
DE 3114872	C	19850912				198538

Priority Applications (No Type Date): DE 3114872 A 19810413; GB 8134169 A
19811112; US 81281165 A 19810707

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3114872	A		25		

Abstract (Basic): DE 3114872 A

The **implant** consists of a curved bar made from an elastic material arranged with its convex side against the **convex** curve of the **spine** on one side of the spinous processes. The toothed fixing pieces (5) secure the bar in the frontal plane by means of adjustable tension rod (6).

A screw through one hole (10) fixes the bar to the cranial end of the spine. To increase the working length of the bar a screw can be fixed through the caudal end. Two hooks (13) fix the bar in the sagittal plane. The **implant** reduces operation time and blood loss.

1/9

Title Terms: **IMPLANT** ; CORRECT; SPINE; CURVE; COMPRISE; CURVE; BAR; TOOTH;
FIX; SECURE; SPINE; ADJUST; THREAD; ROD
Derwent Class: P31; P32
International Patent Class (Additional): **A61B-017/18 ; A61F-005/01**
File Segment: EngPI

38/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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003277445
WPI Acc No: 1982-C5430E/198210
Bar implant for surgical scoliosis treatment - has hook secured to bar

by friction and engaging vertebrae

Patent Assignee: FRAUNHOFER-GES FORD ANGE (FRAU)

Inventor: NEUGEBAUER J

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3032237	A	19820304				198210 B
DE 3032237	C	19831110				198346

Priority Applications (No Type Date): DE 3032237 A 19800827

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
DE 3032237	A	12		

Abstract (Basic): DE 3032237 A

The **implant** for the treatment of scoliosis has a bar subjected to compression load and placed on the **concave** side of the **spinal** column. Hooks on the bar exert thrust on vertebrae, so as to stretch the portion of the column between them.

One hook (16) at least is secured by friction on the bar (14), typically using a slotted clamping sleeve (18) with a bore (15) accommodating the bar, and clamped to the latter by a nut (17). Alternatively, the hook can have two jaws fitting round the bar and clamped against it by a bolt.

3a

Title Terms: BAR; **IMPLANT** ; SURGICAL; SCOLIOSIS; TREAT; HOOK; SECURE; BAR; FRICTION; ENGAGE; VERTEBRA

Derwent Class: P31; P32

International Patent Class (Additional): **A61B-017/18** ; **A61F-001/00**

File Segment: EngPI

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S2	28654	ENDPLATE? OR END()PLATE? ?
S3	1180118	PROSTHE? OR IMPLANT? OR ENDOPROSTHE?
S4	2048599	BONE OR BONES OR BONEY OR BONED OR OSSEOUS? OR OSTEOAL?
S5	4798519	REMOV? OR EXTRACT? OR SHAPE? ? OR SHAPING
S6	1138307	REAM??? OR MILL OR MILLS OR MILLED OR MILLER? ? OR MILLING OR BORE? ? OR BORING OR CUT OR CUTS OR CUTTING OR DRILL??? OR SCRAPE? ? OR SCRAPING
S7	106327	SCRAPE? ? OR SCRAPING? OR SHAVE? ? OR SHAVING? OR ABRASE? ? OR ABRADING? OR ABRASION?
S8	40553	CONCAV?
S9	100100	CONVEX?
S10	4030797	RESILIEN? OR PLASTIC? OR THERMOPLASTIC? OR POLYMER? OR VIS- COELASTIC? OR VISCO()ELASTIC? OR HYDROGEL? OR HYDRO()GEL
S11	3537521	BODY OR BODIES OR DISC OR DISCS OR DISK OR DISKS
S12	23053	S4(3N)S5:S7
S13	19815	S10(5N)S11
S14	0	S1 AND S2 AND S3 AND S12 AND S8 AND S9 AND S13
S15	0	S1:S2 AND S3 AND S12 AND S8 AND S9 AND S13
S16	1	S1:S2 AND S3 AND S12 AND S8 AND S9
S17	3	S1:S2 AND S3 AND S12 AND S8:S9
S18	2	S17 NOT S16
S19	819	S1:S2 AND S3 AND S12
S20	152	S1:S2 (S) S3 (S) S12
S21	31	S20 NOT (S16 OR S18 OR PY=1995:2006)
S22	17	RD (unique items)
S23	92996	S1(5N)S11
S24	70	S23 AND S3 AND S12
S25	3	S24 NOT (S16 OR S18 OR S21 OR PY=1995:2006)
S26	2	RD (unique items)
S27	2167116	CURVE? ? OR CURVING OR ROUND??? OR ARCH OR ARCHED OR ARCHI- NG OR ARC OR ARCS OR ARCING OR ARCED OR SPHERE? ? OR SEMI()CI- RCULAR? OR SEMICIRC?
S28	6885	S27(5N)S1:S2
S29	2	S28 AND S3 AND S12
S30	4891	S4(5N)S27
S31	41	S30 AND S3 AND S12
S32	7	S31 NOT (S16 OR S18 OR S21 OR S25 OR PY=1995:2006)
S33	7	RD (unique items)
S34	5336	(S8:S9 OR S27)(5N)S3
S35	47	S34 AND S12
S36	4	S35 NOT (S16 OR S18 OR S21 OR S25 OR S32 OR PY=1995:2006)
S37	2	RD (unique items)
S38	9385	S1(5N)S3
S39	76	S38 AND S12
S40	1	S39 AND S34
S41	2	S39 NOT (S16 OR S18 OR S21 OR S25 OR S32 OR S36 OR PY=1995- :2006)
S42	28	S3 AND S12 AND S8:S9
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S44	2	RD (unique items)
S45	20296	JOINT?(2N)(REPLACE? ? OR REPLACING OR REPLACEMENT?)
S46	6	S45 AND S12 AND S34
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File	5:Biosis Previews(R)	1969-2006/Feb W2 (c) 2006 BIOSIS
File	73:EMBASE	1974-2006/Feb 22 (c) 2006 Elsevier Science B.V.

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File 94:JICST-EPlus 1985-2006/Nov W4
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File 144:Pascal 1973-2006/Jan W5
(c) 2006 INIST/CNRS
File 23:CSA Technology Research Database 1963-2006/Feb
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Set	Items	Description
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S4	1246157	BONE OR BONES OR BONEY OR BONED OR OSSEOUS? OR OSTEOAL?
S5	12217	CONCAV?
S6	15476	CONVEX?
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S9	3226	S3(5N)S5:S7
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S11	2296553	REMOV? OR EXTRACT? OR SHAPE? ? OR SHAPING OR REAM??? OR CUT OR CUTS OR CUTTING OR SCRAPE? ? OR SCRAPING OR SHAVE? ? OR S- HAVING?
S12	18071	S11(5N)S4
S13	19	S8 AND S9 AND S12
S14	10	RD (unique items)

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File 155:MEDLINE(R) 1951-2006/Feb 22
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File 73:EMBASE 1974-2006/Feb 23
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File 5:Biosis Previews(R) 1969-2006/Feb W3
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S1	137110	SPINE OR SPINAL? OR VERTEBRA? OR INTERVERTEBRA?
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S6	5181195	REAM??? OR MILL OR MILLS OR MILLED OR MILLER? ? OR MILLING OR BORE? ? OR BORING OR CUT OR CUTS OR CUTTING OR DRILL??? OR SCRAPE? ? OR SCRAPING
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S9	20772	CONVEX?
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S12	1999	S1:S2(5N)S8:S10
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S14	54	S11(S)S1:S2(S)S3
S15	1	S14 NOT PY=1995:2006
S16	1	RD (unique items)
S17	16	S11(S)S3(S)S8:S10
S18	7	S17 NOT (S14 OR PY=1995:2006)
S19	3	RD (unique items)
S20	10399	S1:S2 (S) S3
S21	70	S1:S2(S)S3(S)(S4(5N)S5:S7)
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S23	1	RD (unique items)
S24	1287	S4(5N)(S8:S10)
S25	71	S11(S)S24
S26	0	S11(S)S24(S)S3
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S29	214	S1:S2(S)S12(S)S4
S30	10	S1:S2(S)S12(S)S3(S)S4
S31	10	S30 NOT (S14 OR S18 OR S22 OR S27)
S32	6	RD (unique items)
S33	660	S3(5N)S8:S10
S34	34	(S1:S2 OR S4)(S)S33
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S36	25	RD (unique items)
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S39	573	S11(S)S3(S)(S1:S2 OR S4)
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S41	8	S40 (S) S11 (S) S3
S42	4	RD (unique items)
File	9:Business & Industry(R)	Jul/1994-2006/Feb 22 (c) 2006 The Gale Group
File	16:Gale Group PROMT(R)	1990-2006/Feb 23 (c) 2006 The Gale Group
File	160:Gale Group PROMT(R)	1972-1989 (c) 1999 The Gale Group
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19/9/3 (Item 1 from file: 636)
DIALOG(R) File 636:Gale Group Newsletter DB(TM)
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01479142 Supplier Number: 42045837 (THIS IS THE FULLTEXT)

CARTILAGE REPAIR SYSTEM

Medical Textiles, pN/A

May, 1991

ISSN: 0266-2078

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 259

TEXT:

A cartilage repair system that consists of two carbon fibre **implants** is available from Surgicraft Ltd, following its acquisition of Medicarb from Leyland Medical International. In the system, circular carbon fibre pads and rods are inserted into the subchondral **bone** after **removal** of the defective articular cartilage. The company says that the **implants**, which are biocompatible, initiate a rapid biological resurfacing of defective joint surfaces. The resultant repair tissue consists of well-vascularized fibrous tissue which forms a new articular surface. Conditions suitable for the procedure include osteoarthritis, osteochondritis and chondromalacia patellae, according to Surgicraft. The pad component, known as the 'Cleveland repair', was developed at the Middlesbrough General Hospital, UK, by David Muckle, and designed for flat or **concave** surfaces in the knee. The pads are simply inserted into an undercut in the bone and fixed by friction fit without the need for cement or stabilizing pins. The open matrix of the carbon fibre provides support for the formation of fibrous connective tissue. The other component is a rod of carbon fibres encased in a woven jacket. It is known as the 'Gateshead rod' as it was developed at the Queen Elizabeth Hospital in Gateshead, UK, by John Betts. It is designed for use on **convex** and load-bearing surfaces, and the rods are inserted into pre-drilled holes and fixed by friction fit. After **implantation**, the rods provide a stable matrix for rapid infiltration of organized fibrous tissue. Contact: Surgicraft Ltd, Fishing Line Road, Redditch, Worcs B97 6HF, UK; tel: +44-527-66331; fax: +44-527-65295.

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PUBLISHER NAME: International Newsletters

INDUSTRY NAMES: BUSN (Any type of business); FASH (Fashion, Accessories and Textiles); HLTH (Healthcare - Medical and Health); INTL (Business, International)

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Set	Items	Description
S1	18	AU=(BRYAN V? OR BRYAN, V?)
S2	19	AU=(KUNZLER A? OR KUNZLER, A?)
S3	14	S1 AND S2
S4	13	S3 AND (IMPLANT? OR PROSTHES? OR SPINE OR SPINAL OR VERTEB- RA?)
S5	13	IDPAT (sorted in duplicate/non-duplicate order)
S6	13	IDPAT (primary/non-duplicate records only)
S7	20	S1:S2 AND (IMPLANT? OR PROSTHES? OR SPINE OR SPINAL OR VER- TEBRA? OR INTERVERTEBRA?)
S8	7	S7 NOT S5

File 347:JAPIO Nov 1976-2005/Oct(Updated 060203)
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File 350:Derwent WPIX 1963-2006/UD,UM &UP=200612
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5/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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016997886 **Image available**
WPI Acc No: 2005-322202/200533
Related WPI Acc No: 2003-709756
XRPX Acc No: N05-263538

Disc space preparing assembly for preparing vertebral disc space prior to receipt of prosthesis , includes plate coupled to guide block and to at least one guide track of support frame, and moved to various positions by actuating knob

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)
Inventor: ALLARD R; BROMAN R; **BRYAN V** ; FINAZZO A; GIL C; **KUNZLER A** ;
MARSHALL E; TOKISH L J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050096746	A1	20050505	US 2001333627	P	20011126	200533 B
			US 2002303569	A	20021125	
			US 2004989775	A	20041116	

Priority Applications (No Type Date): US 2001333627 P 20011126; US
2002303569 A 20021125; US 2004989775 A 20041116

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050096746	A1	32	A61F-002/30	Provisional application	US 2001333627

Div ex application US 2002303569

Abstract (Basic): US 20050096746 A1

NOVELTY - The assembly includes a position-control mechanism having a plate and an actuating knob. The plate is coupled to a guide block and to at least one of the two guide tracks of a support frame (318), while the actuating knob facilitates adjusting the position of the plate, thus adjusting the position of the guide block.

DETAILED DESCRIPTION - The guide tracks extend from a base (310) fixed to **vertebral** discs (124,126). The guide plate has an opening that accommodates a bone-removal device. An **INDEPENDENT CLAIM** is also included for a **vertebral** disc space preparing method.

USE - For preparing **vertebral** disc space prior to receipt of **prosthesis** e.g. **spinal** disc endoprosthesis.

ADVANTAGE - Simplifies and expedites removal of assembly from within disc space, thus allowing surgeon to quickly address any surgical complications that might occur. Facilitates maximum view of surgical site. Facilitates precise position of **prosthesis** within **vertebral** disc space.

DESCRIPTION OF DRAWING(S) - The figure shows the isometric view of the disc space preparing assembly.

Vertebral discs (124,126)

Sagittal wedge (300)

Base (310)

Support frame (318)

pp; 32 DwgNo 26/38

Title Terms: DISC; SPACE; PREPARATION; ASSEMBLE; PREPARATION; **VERTEBRA** ;
DISC; SPACE; PRIOR; RECEIPT; **PROSTHESIS** ; PLATE; COUPLE; GUIDE; BLOCK;
ONE; GUIDE; TRACK; SUPPORT; FRAME; MOVE; VARIOUS; POSITION; ACTUATE; KNOB

Derwent Class: P32

International Patent Class (Main): A61F-002/30

File Segment: EngPI

5/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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016766445 **Image available**
WPI Acc No: 2005-090721/200510
Related WPI Acc No: 2003-139088
XRPX Acc No: N05-079255

Drill head for use in placing endoprosthesis, has driver which drives a form cutter having a profile capable of imparting a shape to the bone of intervertebral bodies which mates with the surface shape of an endoprosthesis

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)
Inventor: **BRYAN V ; KUNZLER A**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050015091	A1	20050120	US 97944234	A	19971006	200510 B
			US 2004808553	A	20040325	

Priority Applications (No Type Date): US 97944234 A 19971006; US 2004808553 A 20040325

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050015091	A1		7	A61B-017/56	Div ex application US 97944234

Abstract (Basic): US 20050015091 A1

NOVELTY - A driver (24) drives a form cutter (29) which has a profile capable of imparting a shape to the bone of intervertebral bodies which mates with the surface shape of an endoprosthesis. The cutter profile has a height capable of being admitted into the space between two opposing intervertebral bodies and the drill head (20) can perform milling action in a direction angled away from the direction of head entry.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an apparatus for preparing an **implantation** space in the human **spine** to receive an insert between adjacent **vertebral** bodies.

USE - For use in placing endoprosthesis between two opposing intervertebral bodies.

ADVANTAGE - Provides a drill head which can fit between the narrow space between two opposing intervertebral bodies. Prepares the bone of two opposing intervertebral bodies to accept the concaval-convex shape of an endoprosthesis.

DESCRIPTION OF DRAWING(S) - The figure shows the cross-sectional view of the drill head.

Drill head (20)
Driver (24)
Form cutter (29)
Housing (31)
Shaft support (37)
pp; 7 DwgNo 2/3

Title Terms: DRILL; HEAD; PLACE; ENDOPROSTHESIS; DRIVE; DRIVE; FORM; CUT; PROFILE; CAPABLE; IMPART; SHAPE; BONE; INTERVERTEBRAL; BODY; MATE; SURFACE; SHAPE; ENDOPROSTHESIS

Derwent Class: P31

International Patent Class (Main): A61B-017/56

File Segment: EngPI

5/5/3 (Item 3 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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016272294 **Image available**

WPI Acc No: 2004-430188/200440

Related WPI Acc No: 2003-897215

XRAM Acc No: C04-161041

XRPX Acc No: N04-340088

Device for grasping tissue, comprises tubular unit having annular surface at distal tip, and barb projecting from annular surface of tubular unit having sharp edge to insert into tissue and grasp tissue without puncturing

Patent Assignee: BAKER D R (BAKE-I); BRYAN V E (BRYA-I); KUNZLER A (KUNZ-I)

Inventor: BAKER D R; BRYAN V E ; KUNZLER A

Number of Countries: 108 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040087914	A1	20040506	US 200239240	A	20020104	200440 B
			US 2003616864	A	20030709	
WO 200504947	A2	20050120	WO 2004US21952	A	20040707	200508

Priority Applications (No Type Date): US 2003616864 A 20030709; US 200239240 A 20020104

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040087914	A1	25	A61M-025/00	CIP of application	US 200239240
WO 200504947	A2 E		A61M-000/00		

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20040087914 A1

NOVELTY - The tissue grasping device comprises tubular unit having an annular surface surrounding a terminal port at distal tip, and barb projecting at an angle from the annular surface of tubular unit. One or more barbs have a sharp edge configured to insert into the tissue and grasp the tissue as the tubular unit is rotated at longitudinal axis, and enables to release the tissue without puncturing.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) **spinal** delivery system;
- (2) epidural grasping device;
- (3) **spinal** tool delivery system;
- (4) **spinal** needle system;
- (5) usage of cannula (16) comprising inserting the cannula through a first layer of tissue, detecting contact of the distal surface of the cannula with a second layer of tissue, and rotating the cannula in a first direction about a longitudinal axis to urge the at least one barb into engagement with the second layer of tissue;
- (6) usage of **spinal** needle delivery system;
- (7) surgical device where the grasping means comprises adhesive material at the distal tip; and
- (8) tissue grasping and releasing device.

USE - For grasping, holding, stabilizing and releasing tissue with

minimal damage. The device and system is effective in grasping, holding, stabilizing and releasing tissue without causing any damage. The system facilitates appropriate placement of epidural or subdural catheter and patches.

DESCRIPTION OF DRAWING(S) - The figure shows the diagram of **spinal** needle delivery system.

biasing unit (14)
cannula (16)
locking unit (18)
connector portions (18a,18b)
aperture (34)
pp; 25 DwgNo 3/28

Title Terms: DEVICE; GRASP; TISSUE; COMPRISE; TUBE; UNIT; ANNULAR; SURFACE; DISTAL; TIP; BARBED; PROJECT; ANNULAR; SURFACE; TUBE; UNIT; SHARP; EDGE; INSERT; TISSUE; GRASP; TISSUE; PUNCTURE

Derwent Class: B07; P34; S05

International Patent Class (Main): A61M-000/00; A61M-025/00

File Segment: CPI; EPI; EngPI

5/5/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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016231412 **Image available**

WPI Acc No: 2004-389301/200436

XRPX Acc No: N04-309897

Surgical procedure for preparing patient to receive vertebral disc endoprosthesis, involves inserting intervertebral disc endoprosthesis between concave surfaces formed in endplates of confronting vertebral bodies

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)

Inventor: **BRYAN V ; KUNZLER A**

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040098131	A1	20040520	US 2001776394	A	20010202	200436 B
			US 2003713837	A	20031114	

Priority Applications (No Type Date): US 2001776394 A 20010202; US 2003713837 A 20031114

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040098131	A1	16	A61F-002/44	Cont of application	US 2001776394

Abstract (Basic): US 20040098131 A1

NOVELTY - The surgical procedure involves inserting an intervertebral disc endoprosthesis between the concave surfaces formed in the endplates of confronting **vertebral** bodies. The endoprosthesis has L-shaped supports with convex surfaces (52,54) for engaging the concave surfaces.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) a method of **spinal** surgery;
- (b) a method of endoprosthetic discectomy surgery; and
- (c) a method of inserting a **prosthesis** in a disc space.

USE - Used for preparing a patient to receive **vertebral** disc endoprosthesis, and for **implanting** the endoprosthesis in the patient's **spine**.

ADVANTAGE - Enables accurately mating the endoprosthesis with an adjacent specifically formed bone surface. Permits effective and

permanent installation of the endoprosthesis **vertebral** body and associated parts.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of a portion of the human **spine** where the **vertebral** disc endoprosthesis is installed.

Resilient body (20)
Exterior portion (22)
Central portion (24)
Convex surfaces (52,54)
pp; 16 DwgNo 3/14

Title Terms: SURGICAL; PROCEDURE; PREPARATION; PATIENT; RECEIVE; **VERTEBRA**
; DISC; ENDOPROSTHESIS; INSERT; INTERVERTEBRAL; DISC; ENDOPROSTHESIS;
CONCAVE; SURFACE; FORMING; CONFRONTING; **VERTEBRA** ; BODY

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

5/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015835011 **Image available**

WPI Acc No: 2003-897215/200382

Related WPI Acc No: 2004-430188

XRAM Acc No: C03-254680

XRPX Acc No: N03-716085

Tissue grasping device used for spinal needle delivery system, includes cannula having annular surface, and barb(s) having sharp edge

Patent Assignee: BRYAN V E (BRYA-I); KUNZLER A (KUNZ-I)

Inventor: **BRYAN V E ; KUNZLER A**

Number of Countries: 103 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030130621	A1	20030710	US 200239240	A	20020104	200382	B
WO 200357282	A1	20030717	WO 2002US41574	A	20021227	200382	
AU 2002367295	A1	20030724	AU 2002367295	A	20021227	200421	
EP 1485150	A1	20041215	EP 2002806242	A	20021227	200482	
			WO 2002US41574	A	20021227		
KR 2004102355	A	20041204	KR 2004710550	A	20040705	200525	
JP 2005514118	W	20050519	WO 2002US41574	A	20021227	200538	
			JP 2003557639	A	20021227		
CN 1610568	A	20050427	CN 2002826539	A	20021227	200558	
MX 2004006548	A1	20050401	WO 2002US41574	A	20021227	200571	
			MX 20046548	A	20040702		

Priority Applications (No Type Date): US 200239240 A 20020104

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20030130621 A1 18 A61M-005/178

WO 200357282 A1 E A61M-005/178

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN
YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM
ZW

AU 2002367295 A1 A61M-005/178 Based on patent WO 200357282

EP 1485150 A1 E A61M-005/178 Based on patent WO 200357282

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
 GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
 KR 2004102355 A A61M-005/32
 JP 2005514118 W 21 A61M-005/32 Based on patent WO 200357282
 CN 1610568 A A61M-005/178
 MX 2004006548 A1 A61M-005/178 Based on patent WO 200357282

Abstract (Basic): US 20030130621 A1

NOVELTY - A tissue grasping device comprises a cannula (16) having at a distal tip (36) an annular surface surrounding a terminal port; and a barb(s) (50) projecting at an angle from the annular surface of the cannula, each at least one barb having a sharp edge configured to insert into the tissue and grasp the tissue as the cannula is rotated about a longitudinal axis.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a **spinal** delivery system to deliver a tool through a tissue, comprises:

(a) a tube having a longitudinal axial bore and, at a distal tip, an annular surface surrounding a terminal port;

(b) a housing (20) secured to a proximal end of the tube, the housing having an internal cavity with an aperture (34) formed in its proximal surface opposite the proximal end of the tube;

(c) a tool sized and shaped tube slidably received within the bore of the tube and having a blunt distal tip portion sized to pass through the terminal port in the distal tip of the tube and a proximal end portion sized to pass through the aperture in the proximal surface of the housing, the tool mounted in the housing to move between an extended position, where the distal tip portion extends beyond the distal tip of the tube and a retracted position where the distal tip portion is withdrawn inside the tube; and

(d) a resilient compression member mounted in the housing and configured to engage the tool when the tool is at an intermediate position between the extended position and the retracted position to urge the tool into the extended position; and

(2) a method using the **spinal** needle delivery system involves:

(i) in a previously perforated first layer of relatively high resistance tissue, enlarging the perforation to permit entry of a distal tip of a blunt stylet (12);

(ii) stabilizing the **spinal** needle delivery system relative to the enlarged perforation; advancing the distal tips of the blunt stylet and the cannula into and through the enlarged perforation in the layer of relatively high resistance tissue;

(iii) using an indicator (24), determining that the distal tip of the blunt stylet has passed through the enlarged perforation in the layer of relatively high resistance tissue into a space of relatively low resistance;

(iv) securing the cannula lock to the shaft of the cannula, thus fixing the adhesive band relative to the cannula and advancing the distal tips of the blunt stylet and the cannula through the space of relatively low resistance and into contact with a second relatively high resistance tissue;

(v) using the indicator, determining that the distal tip of the cannula has contacted the second relatively high resistance tissue; rotating the cannula into an engaged position by rotating the cannula in a direction to engage the barbs with the second relatively high resistance tissue until resistance to continued rotation is encountered;

(vi) supporting the cannula in the engaged position while advancing the cannula lock and adhesive band contacts but does not depress the first layer of relatively high resistance tissue adjacent to the enlarged perforation;

(vii) adhering the adhesive band to the first layer of relatively high resistance tissue; and supporting the cannula of the **spinal** needle delivery system.

USE - The invention is used for a **spinal** needle delivery system (claimed).

ADVANTAGE - The invention stabilizes tissue during penetration by the stylet, and provides visual and tactile indications of contact with and penetration of tissue.

DESCRIPTION OF DRAWING(S) - The figure shows the **spinal** needle delivery system.

Stylet (12)
Cannula (16)
Housing (20)
Indicator (24)
Aperture (34)
Distal tip (36)
Barb (50)
pp; 18 DwgNo 3/16

Title Terms: TISSUE; GRASP; DEVICE; **SPINE** ; NEEDLE; DELIVER; SYSTEM;

CANNULA; ANNULAR; SURFACE; BARBED; SHARP; EDGE

Derwent Class: B07; P34; S02; S05; T01; V07

International Patent Class (Main): A61M-005/178; A61M-005/32

International Patent Class (Additional): A61M-025/02

File Segment: CPI; EPI; EngPI

5/5/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015647573 **Image available**

WPI Acc No: 2003-709756/200367

Related WPI Acc No: 2005-322202

XRPX Acc No: N03-567344

Implantable joint prosthesis for replacement of diarthroidal or arthroidal joints has motion limiting components on at least one shell and on central body to limit movement of central body relative to shells

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)

Inventor: ALLARD R; BROMAN R; **BRYAN V** ; FINAZZO A; GIL C; **KUNZLER A** ; MARSHALL E; TOKISH L; TOKISH L J

Number of Countries: 103 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030135277	A1	20030717	US 2001333627	P	20011126	200367 B
			US 2002303569	A	20021125	
WO 200363727	A2	20030807	WO 2002US37835	A	20021126	200367
AU 2002346524	A1	20030902	AU 2002346524	A	20021126	200422
EP 1460978	A2	20040929	EP 2002784591	A	20021126	200463
			WO 2002US37835	A	20021126	
KR 2004058343	A	20040703	KR 2004708078	A	20040527	200472
JP 2005515827	W	20050602	WO 2002US37835	A	20021126	200541
			JP 2003563425	A	20021126	
ZA 200403877	A	20050928	ZA 20043877	A	20040519	200570

Priority Applications (No Type Date): US 2001333627 P 20011126; US 2002303569 A 20021125

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030135277	A1	35	A61F-002/44	Provisional application	US 2001333627

WO 200363727 A2 E A61F-000/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
OM PH PL PT RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC
VN YU ZA ZM ZW
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
AU 2002346524 A1 A61F-002/44 Based on patent WO 200363727
EP 1460978 A2 E A61F-002/44 Based on patent WO 200363727
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
KR 2004058343 A A61F-002/44
JP 2005515827 W 40 A61F-002/44 Based on patent WO 200363727
ZA 200403877 A 69 A61F-000/00

Abstract (Basic): US 20030135277 A1

NOVELTY - A central body (60) is disposed between upper and lower, opposed, biocompatible shells (20,30). A motion limiting component on at least one of the shells contacts the motion limiting component on the central body to limit motion of the central body relative to the shells.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) an assembly for preparing a **vertebral** disc space to receive a **prosthesis** ; and

(b) a bone removal device.

USE - For replacement of diarthroidal or arthroidal joints.

ADVANTAGE - Provides **implant** design that is highly stable when **implanted** . Makes use of soft tissue associated with joint to stabilize **implant** and restrict some motion of joint. Generates less wear debris. Enables debris to be contained within **implant** so as not to contact with live tissue or body fluids.

DESCRIPTION OF DRAWING(S) - The figure is a sectional view of an intervertebral endoprosthesis.

Shell (20,30)

Central body (60)

pp; 35 DwgNo 6/38

Title Terms: **IMPLANT** ; JOINT; **PROSTHESIS** ; REPLACE; JOINT; MOTION; LIMIT; COMPONENT; ONE; SHELL; CENTRAL; BODY; LIMIT; MOVEMENT; CENTRAL; BODY; RELATIVE; SHELL

Derwent Class: P31; P32

International Patent Class (Main): A61F-000/00; A61F-002/44

International Patent Class (Additional): A61B-017/16

File Segment: EngPI

5/5/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014518636 **Image available**

WPI Acc No: 2002-339339/200237

Related WPI Acc No: 2002-329476; 2005-161978

XRAM Acc No: C02-097394

XRPX Acc No: N02-266873

Surgical implant useful as intervertebral disc endoprosthesis, for replacement of diarthroidal or arthroidal joints, in vertebrates , comprises two rigid opposing shells and deformable, resilient central body

Patent Assignee: SPINAL DYNAMICS CORP (SPIN-N); SDGI HOLDINGS INC (SDGI-N);
BRYAN V (BRYA-I); KUNZLER A (KUNZ-I); CLARK C R (CLAR-I); CONTA B
(CONT-I); GIL C E (GILC-I)
Inventor: BRYAN V ; CONTA R; KUNZLER A ; ROULEAU J; CONTA B; CLARK C R;
GIL C E

Number of Countries: 097 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200211650	A2	20020214	WO 2001US24791	A	20010807	200237 B
US 20020035400	A1	20020321	US 2000223863	P	20000808	200237
			US 2001783910	A	20010213	
AU 200181166	A	20020218	AU 200181166	A	20010807	200244
US 20020128715	A1	20020912	US 2000223863	P	20000808	200262
			US 2001265218	P	20010131	
			US 2001783910	A	20010213	
			US 2001924298	A	20010808	
EP 1363565	A2	20031126	EP 2001959631	A	20010807	200380
			WO 2001US24791	A	20010807	
JP 2004505668	W	20040226	WO 2001US24791	A	20010807	200416
			JP 2002516989	A	20010807	

Priority Applications (No Type Date): US 2001783910 A 20010213; US
2000223863 P 20000808; US 2001265218 P 20010131; US 2001924298 A 20010808

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200211650	A2	E	51	A61F-002/44	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

US 20020035400	A1			A61F-002/44	Provisional application US 2000223863
AU 200181166	A			A61F-002/44	Based on patent WO 200211650
US 20020128715	A1			A61F-002/44	Provisional application US 2000223863

Provisional application US 2001265218
Cont of application US 2001783910

EP 1363565	A2	E		A61F-002/44	Based on patent WO 200211650
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
LU MC NL PT SE TR

JP 2004505668	W		83	A61F-002/44	Based on patent WO 200211650
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Abstract (Basic): WO 200211650 A2

NOVELTY - A surgical **implant** (10) comprises two rigid opposing shells (OS) (40), each having an edge between an outer and inner surfaces; and a deformable, resilient central body (60) disposed between the inner surfaces of OS. The outer surface of OS is adapted to engage bone surfaces of a joint. The friction between the outer surface and bone surface restricts movement of OS relative to bone surface.

DETAILED DESCRIPTION - The inner surfaces of OS are smoother than the outer surfaces. The central body comprises an outer surface having at least one portion shaped to complement and articulate with the shape of the inner surface of rigid opposing shell(s), such that the inner surface of opposing shells and outer surface of central body move easily with respect to each other within a constrained range of motion.

INDEPENDENT CLAIMS are also included for the following:

- (a) a **vertebral** endoprosthesis;
- (b) bone joint **implant** ;
- (c) method of introducing a lubricant into the **implant** ; and

(d) system of bone joint **implants** of varying sizes

USE - As intervertebral disc endoprosthesis, for replacement of diarthroidal or arthroidal joints, or portions of intervertebral disc material, in **vertebrates**, including humans.

ADVANTAGE - The **implant** having excellent stability, effectively utilizes soft tissues associated with joints to stabilize the **implant** and restricts some motion of the joint to the soft tissue. The **implant** having a simple design, provides effectively sealed, fluid filled capsule, irrespective of the joint being **implanted**. The **implant** is safe, enables control and engineering of moving surfaces, potentially generates less wear debris, enables tissue in-growth into the articulating regions of the **implant** and prevents degeneration of **implant** material by body fluids. The **implant** closely approximates the bio-mechanics and motion of a healthy joint, thus allowing co-ordinating movement of **spine** and reducing stress on adjacent joints. The rough outer surfaces of opposing shells provides excellent frictions, hence sufficiently restricts slippage between outer surface and bone surface in the joint. The deformable resilient central body also provides excellent elasticity, mechanical stability, wear resistance and dampening properties, similar to healthy joint tissues. The central body also provides sufficient creep-resistance or resistance to plastic deformation, to avoid post-operative loss of disc space height and to maintain appropriate joint geometry. The lubricious central body also provides good tribological properties in junction with inner surfaces of rigid shells. The **implant** can be **implanted** with precision and once **implanted** it is highly stable. The **implant** provide a sealed capsule presenting bio-compatible surfaces to surrounding tissues and keeping wear surfaces internal to the **implant** and permanently lubricated. Hence, the **implant** has extremely high durability, relative to natural intervertebral disc material. The **implant** also minimizes or entirely avoids post-operative adjacent level disc degeneration, and prevents constrains joint torsion. The **implant** increases likelihood of bony in-growth instead of fibrous tissue formation hence has increased long-term stability.

DESCRIPTION OF DRAWING(S) - The figure shows isometric cross-sectional view of the intervertebral endoprosthesis.

Surgical **implant** (10)

Rigid opposing shell (40)

Deformable, resilient central body (60)

pp; 51 DwgNo 4/11

Title Terms: SURGICAL; **IMPLANT**; USEFUL; INTERVERTEBRAL; DISC; ENDOPROSTHESIS; REPLACE; JOINT; **VERTEBRATE**; COMPRISE; TWO; RIGID; OPPOSED; SHELL; DEFORM; RESILIENT; CENTRAL; BODY

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/44

File Segment: CPI; EngPI

5/5/8 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014508773 **Image available**

WPI Acc No: 2002-329476/200236

Related WPI Acc No: 2002-339339; 2003-057296; 2003-844745; 2005-161978

XRFX Acc No: N02-258638

Stereotactic implantation device for precisely locating line containing predetermined point in surgical site using series of levels and plumb-lines

Patent Assignee: SPINAL DYNAMICS CORP (SPIN-N); SDGI HOLDING INC (SDGI-N);

ALLARD R (ALLA-I); BROMAN R J (BROM-I); BRYAN V (BRYA-I); CONTA R (CONT-I); FINAZZO A (FINA-I); GIL C E (GILC-I); KUNZLER A (KUNZ-I); ROULEAU J P (ROUL-I); TOKISH L (TOKI-I); SDGI HOLDINGS INC (SDGI-N)
 Inventor: ALLARD R; BROMAN R J; **BRYAN V**; CONTA R; FINAZZO A; GIL C E; **KUNZLER A**; ROULEAU J P; TOKISH L; YAGER D; BROWMAN R; CONTA B; FINAZZO T; GIL C; MARSHALL E; ROULEAU J; EDFAST J; KELLY A; YAGAR D
 Number of Countries: 097 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200211633	A2	20020214	WO 2001US24793	A	20010807	200236 B
AU 200184752	A	20020218	AU 200184752	A	20010807	200244
US 20020161446	A1	20021031	US 2000223863	P	20000808	200274
			US 2001265218	P	20010131	
			US 2001783860	A	20010213	
			US 2001783910	A	20010213	
			US 2001923891	A	20010807	
EP 1307153	A2	20030507	EP 2001963832	A	20010807	200332
			WO 2001US24793	A	20010807	
US 20040054411	A1	20040318	US 2000223863	P	20000808	200421
			US 2001265218	P	20010131	
			US 2001783860	A	20010213	
			US 2001783910	A	20010213	
			US 2001923891	A	20010807	
			US 2001924298	A	20010808	
			US 2003600052	A	20030620	
JP 2004516044	W	20040603	WO 2001US24793	A	20010807	200436
			JP 2002516973	A	20010807	
US 20050059976	A1	20050317	US 2000223863	P	20000808	200521
			US 2001265218	P	20010131	
			US 2001783860	A	20010213	
			US 2001783910	A	20010213	
			US 2001923891	A	20010807	
			US 2003727808	A	20031204	
US 6949105	B2	20050927	US 2000223863	P	20000808	200563
			US 2001265218	P	20010131	
			US 2001783860	A	20010213	
			US 2001783910	A	20010213	
			US 2001923891	A	20010807	

Priority Applications (No Type Date): US 2001783910 A 20010213; US 2000223863 P 20000808; US 2001265218 P 20010131; US 2001783860 A 20010213; US 2001923891 A 20010807; US 2001924298 A 20010808; US 2003600052 A 20030620; US 2003727808 A 20031204

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200211633 A2 E 265 A61B-017/88

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200184752 A A61B-017/88 Based on patent WO 200211633

US 20020161446 A1 A61F-002/44 Provisional application US 2000223863

Provisional application US 2001265218

CIP of application US 2001783860

CIP of application US 2001783910

EP 1307153 A2 E A61B-017/88 Based on patent WO 200211633

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

US 20040054411 A1	A61F-002/44	Provisional application US 2000223863
		Provisional application US 2001265218
		CIP of application US 2001783860
		CIP of application US 2001783910
		CIP of application US 2001923891
		CIP of application US 2001924298
JP 2004516044 W	394 A61B-017/56	Based on patent WO 200211633
US 20050059976 A1	A61B-017/14	Provisional application US 2000223863
		Provisional application US 2001265218
		CIP of application US 2001783860
		CIP of application US 2001783910
		Div ex application US 2001923891
US 6949105	B2 A61B-019/00	Provisional application US 2000223863
		Provisional application US 2001265218
		CIP of application US 2001783860
		CIP of application US 2001783910

Abstract (Basic): WO 200211633 A2

NOVELTY - A traverse centering tool (200) has opposed retractable tips which have blunt ends that extend laterally after insertion, to contact the sides of the inter- **vertebral** space and includes a marking device and a main shaft. The end of the tool receives a bubble level which can be used to orient the tool so that its end is located at the apogee of a transverse arc (6) defined by the lateral swing of the end of the tool, in order to locate a line containing a predetermined point in a surgical site.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

- (1) A method of determining the appropriate size of a **spine** prosthetic;
- (2) apparatus for positioning a subject;
- (3) method for **implanting** an intervertebral disc **prosthesis** ;
- (4) system for positioning and stabilizing surgical instruments;
- (5) an adjustable frame assembly;
- (6) an instrument clamp;
- (7) method for locating a preferred position for a **prosthesis** ;
- (8) an instrument adapted to locate a position within a surgical site;
- (9) an orienting instrument and device;
- (10) a machine fixture;
- (11) method for adjusting a machining fixture;
- (12) method for preparing a target space within a patient to receive a **prosthesis** ;
- (13) method for confirming a correct position of a machining fixture;
- (14) a multifunction wrench;
- (15) system for machining the space between bones of a joint;
- (16) a milling depth gauge;
- (17) a transverse burring system;
- (18) a burring tool;
- (19) a burring depth gage;
- (20) system for separating and maintaining separation of the bones of a joint;
- (21) a method for distracting **vertebral** bodies;
- (22) a profile-matching distractor;
- (23) a skeletal joint distractor;
- (24) an instrument for inserting a skeletal joint **prosthesis** into a joint space;
- (25) a method for inserting a skeletal joint **prosthesis** into a joint space;

(26) a method of determining the relation of anatomical features relative to gravity.

USE - Location and preparation of site for inter- **vertebral** endo-**prosthesis** .

DESCRIPTION OF DRAWING(S) - The drawing shows the centering tool.

Tool (200)

Arc (6)

pp; 265 DwgNo 1/74

Title Terms: **IMPLANT** ; DEVICE; PRECISION; LOCATE; LINE; CONTAIN;
PREDETERMINED; POINT; SURGICAL; SITE; SERIES; LEVEL; PLUMB; LINE

Derwent Class: P31; P32; S02; S05

International Patent Class (Main): A61B-017/14; A61B-017/56; A61B-017/88;
A61B-019/00; A61F-002/44

International Patent Class (Additional): A61B-019/00

File Segment: EPI; EngPI

5/5/9 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013547170 **Image available**

WPI Acc No: 2001-031376/200104

Related WPI Acc No: 1997-502225; 1999-141763; 2000-085609

XRPX Acc No: N01-024581

**Vertebral disc endoprosthesis has rigid superior and inferior
concaval-convex elements, each with outer surface of predetermined
convexity**

Patent Assignee: SPINAL DYNAMICS CORP (SPIN-N)

Inventor: **BRYAN V ; KUNZLER A**

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6156067	A	20001205	US 94339490	A	19941114	200104 B
			US 96681230	A	19960722	
			US 97856846	A	19970515	

Priority Applications (No Type Date): US 97856846 A 19970515; US 94339490 A
19941114; US 96681230 A 19960722

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6156067	A		15	A61F-002/44	CIP of application US 94339490 CIP of application US 96681230 CIP of patent US 5674296

Abstract (Basic): US 6156067 A

NOVELTY - The **vertebral** disc endoprosthesis has rigid superior and inferior concaval-convex elements (30), each with an outer surface of predetermined convexity and unreticulated surface roughness for engaging adjacent bone structure milled to mate with the surface. Each element has a continuous, smooth non-porous inner concave surface extending across the entire concaval-convex element smooth concave surface.

USE - **Spinal implant** .

ADVANTAGE - Performs effectively within a patient's **spine** over a long period of time.

DESCRIPTION OF DRAWING(S) - The drawing shows a sectional view of the **vertebral** disc endoprosthesis.

Superior and inferior concaval-convex elements (30)

pp; 15 DwgNo 3/14

Title Terms: **VERTEBRA** ; DISC; ENDOPROSTHESIS; RIGID; SUPERIOR; INFERIOR;
CONVEX; ELEMENT; OUTER; SURFACE; PREDETERMINED; CONVEX
Derwent Class: P31; P32
International Patent Class (Main): A61F-002/44
International Patent Class (Additional): A61B-017/56; A61B-017/58
File Segment: EngPI

5/5/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012989387 **Image available**
WPI Acc No: 2000-161240/200014
XRPX Acc No: N00-120257

Intervertebral functional disc prosthesis has multiple discoid shaped resilient viscoelastic inserts between the two halves of a longitudinally split cylindrical housing

Patent Assignee: SPINAL DYNAMICS CORP (SPIN-N)
Inventor: **BRYAN V ; KUNZLER A**
Number of Countries: 087 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200004851	A1	20000203	WO 99US16648	A	19990722	200014 B
AU 9953193	A	20000214	AU 9953193	A	19990722	200029
EP 1100416	A1	20010523	EP 99938781	A	19990722	200130
			WO 99US16648	A	19990722	
AU 748746	B	20020613	AU 9953193	A	19990722	200251
JP 2002521090	W	20020716	WO 99US16648	A	19990722	200261
			JP 2000560845	A	19990722	

Priority Applications (No Type Date): US 9893654 P 19980722

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200004851	A1	E	16	A61F-002/44	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
AU 9953193	A			A61F-002/44	Based on patent WO 200004851
EP 1100416	A1	E		A61F-002/44	Based on patent WO 200004851
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
AU 748746	B			A61F-002/44	Previous Publ. patent AU 9953193 Based on patent WO 200004851
JP 2002521090	W		18	A61F-002/44	Based on patent WO 200004851

Abstract (Basic): WO 200004851 A1

NOVELTY - The **prosthesis** comprises a cylindrical housing (20) split longitudinally in to an upper (22) and lower (24) half, each having a fixator wing (26, 28). Its outer surface carries a continuous screw thread (31). Recesses in the mating surfaces provide locations for a number of discoid shaped resilient viscoelastic inserts (42) which separate, and allow limited relative movement between, the housing's upper and lower halves.

USE - As an intervertebral functional disc **prosthesis**.

ADVANTAGE - The **prosthesis** is small enough for insertion between adjacent **vertebrae**; its cylindrical shape enables it to be inserted

using endoscopic procedures and instrumentation. It provides axial and transverse cushioning of intervertebral loading. **Prostheses** of different size can be used in parallel in order to achieve a desired positional relationship between **vertebrae** .

DESCRIPTION OF DRAWING(S) - The drawings show an isometric view of the **prosthesis** and a transverse cross-section through it.

Cylindrical housing (20)
Upper half of housing (22)
Lower half of housing (24)
Fixator wings (26, 28)
Screw thread (31)
Insert (42)
pp; 16 DwgNo 1,3/14

Title Terms: INTERVERTEBRAL; FUNCTION; DISC; **PROSTHESIS** ; MULTIPLE;
DISCOID; SHAPE; RESILIENT; VISCOELASTIC; INSERT; TWO; HALVES; LONGITUDE;
SPLIT; CYLINDER; HOUSING
Derwent Class: P32
International Patent Class (Main): A61F-002/44
File Segment: EngPI

5/5/11 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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012913773 **Image available**
WPI Acc No: 2000-085609/200007
Related WPI Acc No: 1998-065317; 2001-030841
XRAM Acc No: C00-023846
XRPX Acc No: N00-067121

Human spinal disc prosthesis for implantation in a patient's damaged spine

Patent Assignee: BRYAN V (BRYA-I); KUNZLER A (KUNZ-I)

Inventor: **BRYAN V ; KUNZLER A**

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6001130	A	19991214	US 94339490	A	19941114	200007 B
			US 96681230	A	19960722	
			US 97944378	A	19971006	

Priority Applications (No Type Date): US 97944378 A 19971006; US 94339490 A 19941114; US 96681230 A 19960722

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6001130	A		17	A61F-002/44	CIP of application US 94339490 CIP of application US 96681230 CIP of patent US 5674296

Abstract (Basic): US 6001130 A

NOVELTY - Disc **prosthesis** comprises a resilient body (20) formed of materials varying in stiffness from a relatively stiff exterior portion to a relatively supple central portion. Concaval convex elements (30) partly surround the resilient body to retain the body in a position between the concaval convex elements. Each concaval convex element comprises L-shaped supports (32,34), each support having a first concaval convex leg (42,44).

DETAILED DESCRIPTION - The first leg has an outer surface (52,54) for engaging adjacent bone and a corresponding inner concave surface (62,64) for retaining the resilient body. Each support further has a

second leg (72,74) extending perpendicularly to the first leg and adapted for affixation to adjacent bone structure.

USE - **Vertebral disc endo prosthesis** which will perform effectively and efficiently within a patient's **spine** over a long time period, and which will not encourage degeneration of or cause damage to adjacent natural disc parts.

ADVANTAGE - The endo **prosthesis** can be installed to accurately mate the endo **prosthesis** with an adjacent specifically formed bone surface. The endo **prosthesis** will encourage bone attachment to, and growth upon, adjacent outer surfaces of the endo **prosthesis**. The endo **prosthesis** can be **implanted** in a surgical procedure which will decrease post operative recovery time and inhibit post operative disc, **vertebral** body and **spinal** joint degeneration.

DESCRIPTION OF DRAWING(S) - The drawing shows the disc endo **prosthesis** **implanted** into a human **spine**.

Resilient body (20)

Concaval convex elements (30)

L shaped supports (32,34)

First leg (52,54) Outer surface (42,44)

Inner concave surface (62,64)

Second leg (72,74)

pp; 17 DwgNo 3/14

Title Terms: HUMAN; **SPINE**; DISC; **PROSTHESIS**; **IMPLANT**; PATIENT; DAMAGE
; **SPINE**

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/44

International Patent Class (Additional): A61F-002/44

File Segment: CPI; EngPI

5/5/12 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012335656 **Image available**

WPI Acc No: 1999-141763/199912

Related WPI Acc No: 1997-502225; 2000-085609; 2001-031376

XRPX Acc No: N99-103051

Spinal **column** vertebral disc endoprosthetic discectomy surgical method - determines anterior-posterior and lateral dimensions of each damaged spinal vertebral body part to construct prosthetic discs interconnected by body units and concaval-convex elements

Patent Assignee: BRYAN V (BRYA-I); KUNZLER A (KUNZ-I)

Inventor: **BRYAN V**; **KUNZLER A**

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5865846	A	19990202	US 94339490	A	19941114	199912 B
			US 96681230	A	19960722	
			US 97856513	A	19970515	

Priority Applications (No Type Date): US 96681230 A 19960722; US 94339490 A 19941114; US 97856513 A 19970515

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5865846	A		15	A61F-002/44	CIP of application US 94339490 Div ex application US 96681230 Div ex patent US 5674296

Abstract (Basic): US 5865846 A

The method involves the use of imaging devices such as radiographs, CT and MRI scans to specifically determine the anterior-posterior and lateral dimensions of each damaged natural **spinal vertebral** body and disc. The collated information is then used to construct upper and lower endoprosthetic discs (308, 318) which conform to the upper and lower natural **vertebral** body units (312, 314). Interconnected between the disc units is a titanium **vertebral** body (320) with a biconical shape and circular cross-section, having a hole (360) for receiving the projections (331) extending from preformed upper and lower concaval-convex elements (322, 324), which are screwed (330) to the **vertebral** body. The upper concaval-convex element is welded (341) to an ear (340) which is secured to the lower element and the **vertebral** body via a screw (362) and anchor (352). The endoprosthetic **vertebral** body and the upper and lower discs are assembled as a unit prior to **implantation** into patient's body.

ADVANTAGE- The **vertebral** disc endoprosthesis performs well within the patient's **spine** over a long period of time and does not encourage degeneration of or cause damage to adjacent natural disc parts. Requires no pins or other mechanical hinges for natural motion of the prosthetic parts.

Dwg.6/14

Title Terms: **SPINE** ; COLUMN; **VERTEBRA** ; DISC; ENDOPROSTHESIS; SURGICAL; METHOD; DETERMINE; ANTERIOR; POSTERIOR; LATERAL; DIMENSION; DAMAGE; **SPINE** ; **VERTEBRA** ; BODY; PART; CONSTRUCTION; **PROSTHESIS** ; DISC; INTERCONNECT; BODY; UNIT; CONVEX; ELEMENT

Derwent Class: P32

International Patent Class (Main): A61F-002/44

International Patent Class (Additional): A61F-002/44

File Segment: EngPI

5/5/13 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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011525739 **Image available**

WPI Acc No: 1997-502225/199746

Related WPI Acc No: 1999-141763; 2000-085609; 2001-031376

XRPX Acc No: N97-418706

Human spinal column vertebral disc prosthesis - has resilient body formed of one or materials having concaval-convex elements partially surrounding nucleus portion to provide retainment

Patent Assignee: BRYAN V (BRYA-I); KUNZLER A (KUNZ-I); .SDGI HOLDINGS INC (SDGI-N); SPINAL DYNAMICS CORP (SPIN-N)

Inventor: **BRYAN V ; KUNZLER A**

Number of Countries: 020 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5674296	A	19971007	US 94339490	A	19941114	199746	B
			US 96681230	A	19960722		
EP 820740	A1	19980128	EP 97303934	A	19970606	199809	
CA 2202453	A	19981011	CA 2202453	A	19970411	199912	N
EP 1166725	A2	20020102	EP 97303934	A	19970606	200209	
			EP 2001123288	A	19970606		
EP 820740	B1	20031105	EP 97303934	A	19970606	200377	
			EP 2001123288	A	19970606		
DE 69725932	E	20031211	DE 97625932	A	19970606	200405	
			EP 97303934	A	19970606		
ES 2210458	T3	20040701	EP 97303934	A	19970606	200444	

Priority Applications (No Type Date): US 96681230 A 19960722; US 94339490 A 19941114; CA 2202453 A 19970411

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5674296	A		11	A61F-002/44	CIP of application US 94339490
EP 820740	A1	E	13	A61F-002/44	
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
CA 2202453	A			A61F-002/44	
EP 1166725	A2	E		A61F-002/44	Div ex application EP 97303934 Div ex patent EP 820740
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
EP 820740	B1	E		A61F-002/44	Related to application EP 2001123288 Related to patent EP 1166725
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
DE 69725932	E			A61F-002/44	Based on patent EP 820740
ES 2210458	T3			A61F-002/44	Based on patent EP 820740

Abstract (Basic): US 5674296 A

The endoprosthesis has a resilient body formed of one or more materials which may vary in stiffness from a relatively stiff exterior annular gasket portion to a relatively supple central nucleus portion. Concaval-convex elements at least partly surround that nucleus portion so as to retain the nucleus portion and gasket between adjacent **vertebral** bodies in a patient's **spine** .

Assemblies of endoprosthetic discs, endoprosthetic **vertebral** bodies, and endoprosthetic longitudinal ligaments may be constructed. To **implant** this endoprosthesis assembly, information is obtained regarding the size, shape, and nature of a patient's damaged **spine** . Thereafter, one or more prosthetic **vertebral** bodies and disc units are constructed in conformity with that information. Finally, the completed and conformed **vertebral** body and disc assembly is **implanted** in the patient's **spine** .

ADVANTAGE - Does not require pins or other common mechanical hinge elements.

Dwg.3/14

Title Terms: HUMAN; **SPINE** ; COLUMN; **VERTEBRA** ; DISC; **PROSTHESIS** ; RESILIENT; BODY; FORMING; ONE; MATERIAL; CONVEX; ELEMENT; SURROUND; NUCLEUS; PORTION; RETAIN

Derwent Class: P32

International Patent Class (Main): A61F-002/44

International Patent Class (Additional): A61F-002/44

File Segment: EngPI

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8/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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016837695 **Image available**

WPI Acc No: 2005-161978/200517

Related WPI Acc No: 2002-329476; 2002-339339; 2003-844745

XRPX Acc No: N05-135888

Intervertebral disc prosthesis , has endplate components contacting
existing vertebrae body adjacent to disc space so as to be immobilized
with respect to vertebrae

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)

Inventor: KUNZLER A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050038515	A1	20050217	US 2003600052	A	20030620	200517 B
			US 2004938043	A	20040910	

Priority Applications (No Type Date): US 2004938043 A 20040910; US
2003600052 A 20030620

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20050038515	A1		8	A61F-002/44	CIP of application US 2003600052

Abstract (Basic): US 20050038515 A1

NOVELTY - The device has endplate components (22, 24) and an articulating central body. The components have exterior and interior surfaces, and contact an existing vertebrae body adjacent to the disc space for being immobilized with respect to vertebrae . The vertebrae and the components move together with respect to an articulating central body. The articulating central body extends between the endplate components.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for installing a prosthetic device.

USE - Used for treating a damaged intervertebral disc tissue.

ADVANTAGE - The endplate components provide a smooth, wear-resistant surface and decrease the likelihood of generating wear debris during articulation, thus reducing the deterioration of the adjacent discs.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross sectional side view of exploded intervertebral disc lprosthesis .

Intervertebral disc prosthesis (20)

Endplate components (22,24)

End cap components (36,38)

Recess compartment (44)

Interior surface (58)

pp; 8 DwgNo 3a/9

Title Terms: INTERVERTEBRAL ; DISC; PROSTHESIS ; COMPONENT; CONTACT;
EXIST; VERTEBRA ; BODY; ADJACENT; DISC; SPACE; SO; IMMOBILISE; RESPECT;
VERTEBRA

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

8/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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015496812 **Image available**

WPI Acc No: 2003-558959/200352

XRAM Acc No: C03-150599

XRPX Acc No: N03-444382

Demonstration model assembly used for medical procedures comprises support and model for representing anatomic structure

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)

Inventor: GIL C; KUNZLER A

Number of Countries: 103 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200349066	A1	20030612	WO 2002US38378	A	20021203	200352 B
US 20030138764	A1	20030724	US 2001337246	P	20011203	200352
			US 2002307843	A	20021202	
AU 2002352996	A1	20030617	AU 2002352996	A	20021203	200419
EP 1461794	A1	20040929	EP 2002789962	A	20021203	200463
			WO 2002US38378	A	20021203	
JP 2005512131	W	20050428	WO 2002US38378	A	20021203	200530
			JP 2003550184	A	20021203	
US 6908309	B2	20050621	US 2001337246	P	20011203	200543
			US 2002307843	A	20021202	

Priority Applications (No Type Date): US 2001337246 P 20011203; US 2002307843 A 20021202

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200349066	A1	E	26	G09B-023/28	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW

US 20030138764	A1			G09B-023/28	Provisional application US 2001337246
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AU 2002352996	A1			G09B-023/28	Based on patent WO 200349066
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EP 1461794	A1	E		G09B-023/28	Based on patent WO 200349066
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Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

JP 2005512131	W		15	G09B-023/30	Based on patent WO 200349066
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US 6908309	B2			G09B-023/28	Provisional application US 2001337246
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Abstract (Basic): WO 200349066 A1

NOVELTY - A demonstration model assembly has support (12) and model for representing an anatomic structure (20) and is partially and removably embedded in the support. The support provides a surface (16) adapted to stimulate surgical conditions that would be used on the anatomic structure.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a demonstration platform comprising 2 sides, at least 1 of them has reduced-length operating table side rail being attached; and a surface between the 2 sides and having a connecting structure adapted to receive the demonstration model assembly.

USE - The invention is used for medical procedures useful in training and educating medical personnel.

ADVANTAGE - The invention provides surgical model that is stabilized in compact area and provides stable surface for demonstration.

DESCRIPTION OF DRAWING(S) - The figure shows perspective views of components of the demonstration assembly disassembled.

Support (12)
Coupler portions (14)
Flat surface (16)
Tube (18)
Anatomical model structure (20)
Curvature (22)
Cervical vertebrae (24)
Connective tissue (26)
pp; 26 DwgNo 2/9

Title Terms: DEMONSTRATE; MODEL; ASSEMBLE; MEDICAL; PROCEDURE; COMPRISE;
SUPPORT; MODEL; REPRESENT; STRUCTURE
Derwent Class: A96; P85
International Patent Class (Main): G09B-023/28; G09B-023/30
File Segment: CPI; EngPI

8/5/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2006 Thomson Derwent. All rts. reserv.

015369881 **Image available**
WPI Acc No: 2003-430819/200340
XRPX Acc No: N03-343904

**Bone preparation device has guide member movably engaged between guide
body and bone removal device for guiding bone removal device through a
predetermined circular pattern**

Patent Assignee: SDGI HOLDINGS INC (SDGI-N)

Inventor: KUNZLER A

Number of Countries: 103 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200341567	A2	20030522	WO 2002US36795	A	20021115	200340 B
US 20030097134	A1	20030522	US 2001332111	P	20011116	200350
			US 2002294502	A	20021114	
US 20040087957	A1	20040506	US 2001332111	P	20011116	200430
			US 2002294502	A	20021114	
			US 2003696450	A	20031029	
EP 1455661	A2	20040915	EP 2002799192	A	20021115	200460
			WO 2002US36795	A	20021115	
AU 2002363802	A1	20030526	AU 2002363802	A	20021115	200464
JP 2005508688	W	20050407	WO 2002US36795	A	20021115	200524
			JP 2003543461	A	20021115	

Priority Applications (No Type Date): US 2001332111 P 20011116; US
2002294502 A 20021114; US 2003696450 A 20031029

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200341567 A2 E 27 A61B-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
OM PH PL PT RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC
VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

US 20030097134 A1 A61B-017/16 Provisional application US 2001332111

US 20040087957 A1 A61B-017/00 Provisional application US 2001332111

EP 1455661 A2 E A61B-017/17 CIP of application US 2002294502
Based on patent WO 200341567

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
AU 2002363802 A1 A61B-000/00 Based on patent WO 200341567
JP 2005508688 W 15 A61F-002/46 Based on patent WO 200341567

Abstract (Basic): WO 200341567 A2

NOVELTY - The bone preparation device comprises a guide body (16), a bone removal device (2) having a longitudinal axis extending between a proximal portion and a distal portion, and a guide member (34) movably engaged between the guide body and the bone removal device. The bone removal device is movably guided by the guide member with respect to the guide body through a predetermined circular pattern (18) to form a toroidal shape in the bone.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a kit comprising an **implant**, a guide body, a bone removal device and a guide member movably engaged between the guide body and the bone removal device.

USE - For positioning and controlling movement of bone removal device and thus controlling the profile of material removed by the device.

ADVANTAGE - Bone removal device has drive shaft that is readily removable for maintenance or replacement without significant disassembly of the device.

DESCRIPTION OF DRAWING(S) - The drawing shows a partial cross-sectional schematic of the bone removal device.

bone removal device (2)
guide pins (12,14)
guide body (16)
bone removal profile (18)
bone removal tool (29)
cage (30)
guide mechanism (34)
pp; 27 DwgNo 1/16

Title Terms: BONE; PREPARATION; DEVICE; GUIDE; MEMBER; MOVE; ENGAGE; GUIDE; BODY; BONE; REMOVE; DEVICE; GUIDE; BONE; REMOVE; DEVICE; THROUGH; PREDETERMINED; CIRCULAR; PATTERN

Derwent Class: P31; P32

International Patent Class (Main): A61B-000/00; A61B-017/00; A61B-017/16; A61B-017/17; A61F-002/46

International Patent Class (Additional): A61B-017/56

File Segment: EngPI

8/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015078570 **Image available**

WPI Acc No: 2003-139088/200313

Related WPI Acc No: 2005-090721

XRPX Acc No: N03-110416

Drill head for preparing bones of intervertebral bodies to accept concaval-convex shaped endoprosthesis, has form cutter driven by a drive unit and having predetermined profile and height

Patent Assignee: BRYAN V (BRYA-I); KUNZLER A (KUNZ-I)

Inventor: **BRYAN V ; KUNZLER A**

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020151901	A1	20021017	US 97944234	A	19971006	200313 B

Priority Applications (No Type Date): US 97944234 A 19971006

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
US 20020151901 A1 8 A61B-017/16

Abstract (Basic): US 20020151901 A1

NOVELTY - The head (20) has a housing (31) which encloses a form cutter and a drive unit, in which the drive unit powers the form cutter. The form cutter has a profile capable of imparting a shape to the bone of the **intervertebral** bodies that mates with predetermined surface shape of endoprosthesis, and a height that allows the insertion of the cutter into the space between **intervertebral** bodies.

DETAILED DESCRIPTION - At the inserted state, the head can perform milling action in a direction angled away from the direction of head entry into the space between the **intervertebral** bodies.

USE - For preparing bones of **intervertebral** bodies to accept concaval-convex shaped endoprosthesis.

ADVANTAGE - Ensures reliable fitting of drill head into narrow space between **intervertebral** bodies. Ensures reliable preparation of bones of **intervertebral** bodies to accept concaval-convex shaped endoprosthesis.

DESCRIPTION OF DRAWING(S) - The figure shows the partial sectional view of the drill head.

Drill head (20)

Housing (31)

pp; 8 DwgNo 3/3

Title Terms: DRILL; HEAD; PREPARATION; BONE; **INTERVERTEBRAL** ; BODY; ACCEPT ; CONVEX; SHAPE; ENDOPROSTHESIS; FORM; CUT; DRIVE; DRIVE; UNIT; PREDETERMINED; PROFILE; HEIGHT

Derwent Class: P31

International Patent Class (Main): A61B-017/16

File Segment: EngPI

8/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013131054 **Image available**

WPI Acc No: 2000-302925/200026

XRPX Acc No: N00-226371

Cylindrical disc prosthesis for implanting in spine has threaded housing in 2 symmetrical halves separated by a crescent shaped viscoelastic disc that fits inside the housing

Patent Assignee: SPINAL DYNAMICS CORP (SPIN-N)

Inventor: **BRYAN V** ; CARVER K

Number of Countries: 089 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200013620	A1	20000316	WO 99US20459	A	19990903	200026 B
AU 9958135	A	20000327	AU 9958135	A	19990903	200032
EP 1109517	A1	20010627	EP 99945555	A	19990903	200137
			WO 99US20459	A	19990903	
JP 2002524142	W	20020806	WO 99US20459	A	19990903	200266
			JP 2000568431	A	19990903	

Priority Applications (No Type Date): US 9899279 P 19980904

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
WO 200013620 A1 E 14 A61F-002/44

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
 CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
 KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG
 SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
 Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
 IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
 AU 9958135 A A61F-002/44 Based on patent WO 200013620
 EP 1109517 A1 E A61F-002/44 Based on patent WO 200013620
 Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
 LI LT LU LV MC MK NL PT RO SE SI
 JP 2002524142 W 18 A61F-002/44 Based on patent WO 200013620

Abstract (Basic): WO 200013620 A1

NOVELTY - The **prosthesis** comprises a cylindrical housing (20) with a screw thread (31) and attachment tabs (26,28) on its outside. The housing is split into upper (22) and lower (24) halves with a viscoelastic crescent shaped disc (41,42) separating the halves. When 2 **prostheses** are **implanted** in parallel, the discs form a broken toroid.

USE - **Spinal** disc replacement surgery.

ADVANTAGE - The thin **prosthesis** can be **implanted** by minimal invasive surgery and screwed into the bone by the threads on its outer surface. The viscoelastic discs allow sliding and rotational movement in multiple directions and cushioning in response to loads.

DESCRIPTION OF DRAWING(S) - The drawing is an exploded view of 2 of the **prostheses** arranged in parallel.

Housing (20)
 Upper half of housing (22)
 Lower half of housing (24)
 Attachment tabs (26,28)
 Screw thread (31)
 Crescent shaped discs (41,42)
 pp; 14 DwgNo 1/13

Title Terms: CYLINDER; DISC; **PROSTHESIS** ; **IMPLANT** ; **SPINE** ; THREAD;
 HOUSING; SYMMETRICAL; HALVES; SEPARATE; CRESCENT; SHAPE; VISCOELASTIC;
 DISC; FIT; HOUSING

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

8/5/6 (Item 6 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013131053 **Image available**

WPI Acc No: 2000-302924/200026

XRPX Acc No: N00-226370

Disc prosthesis for implanting in spine has peanut shaped housing having symmetrical upper and lower halves separated by viscoelastic discs that fit in recesses in housing

Patent Assignee: SPINAL DYNAMICS CORP (SPIN-N); SDGI HOLDINGS INC (SDGI-N)

Inventor: **BRYAN V**

Number of Countries: 089 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200013619	A1	20000316	WO 99US20457	A	19990903	200026 B
AU 9957057	A	20000327	AU 9957057	A	19990903	200032
EP 1109516	A1	20010627	EP 99944097	A	19990903	200137
			WO 99US20457	A	19990903	

JP 2002524141	W	20020806	WO 99US20457	A	19990903	200266
			JP 2000568430	A	19990903	
AU 754516	B	20021121	AU 9957057	A	19990903	200305
US 20030199982	A1	20031023	US 9899277	P	19980904	200370
			WO 99US20457	A	19990903	
			US 2001786073	A	20010619	
			US 2003443422	A	20030522	
US 6749635	B1	20040615	US 9899277	P	19980904	200439
			WO 99US20457	A	19990903	
			US 2001786073	A	20010619	

Priority Applications (No Type Date): US 9899277 P 19980904; US 2001786073
A 20010619; US 2003443422 A 20030522

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200013619	A1	E	12	A61F-002/44	
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Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9957057	A				Based on patent WO 200013619
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EP 1109516	A1	E		A61F-002/44	Based on patent WO 200013619
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI

JP 2002524141	W		14	A61F-002/44	Based on patent WO 200013619
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AU 754516	B			A61F-002/44	Previous Publ. patent AU 9957057
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Based on patent WO 200013619

US 20030199982	A1			A61F-002/44	Provisional application US 9899277
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Cont of application WO 99US20457

Cont of application US 2001786073

US 6749635	B1			A61F-002/44	Provisional application US 9899277
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Based on patent WO 200013619

Abstract (Basic): WO 200013619 A1

NOVELTY - The **prosthesis** (10) has a peanut shaped housing (20) with symmetrical upper (22) and lower (24) halves. Viscoelastic discs (41,42) are placed in the concave recesses of the half housings to keep them apart. The discs can be mounted on posts (29) molded in the recesses of the lower housing. The posts can include lubrication holes.

USE - **Spinal** disc replacement surgery.

ADVANTAGE - The thin **implant** can be inserted in the **spine** by minimal invasive surgery. The viscoelastic discs allow sliding and rotational movement in multiple directions and cushioning in response to loads.

DESCRIPTION OF DRAWING(S) - The drawing is an exploded view of the **prosthesis**.

Prosthesis (10)

Housing (20)

Upper half of housing (22)

Lower half of housing (24)

Support posts for discs (29)

Viscoelastic discs (41,42)

pp; 12 DwgNo 4/9

Title Terms: DISC; **PROSTHESIS** ; **IMPLANT** ; **SPINE** ; PEANUT; SHAPE; HOUSING
; SYMMETRICAL; UPPER; LOWER; HALVES; SEPARATE; VISCOELASTIC; DISC; FIT;
RECESS; HOUSING

Derwent Class: P32

International Patent Class (Main): A61F-002/44

File Segment: EngPI

8/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012867457 **Image available**
WPI Acc No: 2000-039290/200003
XRAM Acc No: C00-010259
XRPX Acc No: N00-029610

Balloon jack for distracting vertebral bones in surgery
Patent Assignee: BRYAN V E (BRYA-I); BRYAN V (BRYA-I)
Inventor: **BRYAN V ; BRYAN V E**
Number of Countries: 087 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9959669	A1	19991125	WO 99US11084	A	19990518	200003 B
AU 9940883	A	19991206	AU 9940883	A	19990518	200019
EP 1098672	A1	20010516	EP 99924363	A	19990518	200128
			WO 99US11084	A	19990518	

Priority Applications (No Type Date): US 9885896 P 19980518

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9959669	A1	E	12	A61M-029/00	
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Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK
SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9940883	A			A61M-029/00	Based on patent WO 9959669
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EP 1098672	A1	E		A61M-029/00	Based on patent WO 9959669
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI
LU MC NL PT SE

Abstract (Basic): WO 9959669 A1

NOVELTY - Inflatable balloon is placed into an **intervertebral** disc space between adjacent **vertebral** bones. The balloon jack is inflated in the **intervertebral** disc space by liquid or gas delivered through a syringe attached to stem (12).

USE - For distraction of **vertebral** bodies on either side of the disc space to facilitate surgical procedure between two bones.

ADVANTAGE - The balloon jack avoids the mechanical means of separating bones which apply a mechanical load to the engaged bony surfaces. The force required to separate bones is uniformly distributed, thereby decreasing bone deformation.

DESCRIPTION OF DRAWING(S) - The figure shows the balloon jack in its inflated condition.

Stem (12)

pp; 12 DwgNo 2/4

Title Terms: BALLOON; JACK; **VERTEBRA** ; BONE; SURGICAL

Derwent Class: A25; A96; P34

International Patent Class (Main): A61M-029/00

File Segment: CPI; EngPI

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PLUS Search Results for S/N 10713837, Searched February 21, 2006

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

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5865846
6001130
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